Data network for better European organic market information

Collaborative Project
Collaborative Project targeted to a special group (such as SMEs)

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Data network for better European organic market information

Appendices to D 6.7 report on the experience of conducting the case studies

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Table of Acronyms

Acronym	Description
AAM	Albanian Association of Marketing (Albania)
AEA	Aegean Exporters' Association (Turkey)
Agence Bio	French agency for the development of organic farming (France)
AIAB	The Italian Association for Organic Agriculture
AMI	Agricultural Market Information company (Germany)
APCA	Assemblée permanente des chambres d'agriculture, Permanent assembly of the chambers of agriculture (France)
AssoBio	Associazione nazionale delle imprese di transformazione e distribzione di produtti biologici e naturali (Italy)
BLE	Federal Office for Agriculture and Food (Germany)
BMEL	Ministry of Food and Agriculture (Germany)
BOLW	German umbrella association for the organic sector
CB	Control body
CNIEL	Centre National Interprofessionel de l'economie latiere, sector organisation for milk (France)
CPA	Classification of products by activity, code for identifying products.
CRDA	Commissariat Régional au Développement Agricole (Tunisia)
CSD	Certified sales data (UK)
CTAB	Centre Technique de l'Agriculture Biologique, Technical centre for organic agriculture (Tunisia)
CULS	Czech University of Life Sciences (Czech Republic)
CZ	Czech Republic
DE	Germany
Defra	Department for environment, food and rural affairs (UK)
DGAB	Direction Générale de l'Agriculture Biologique (Tunisia)
EAs	Exporters' Associations (Turkey)
EACCE	Etablissement Autonome de Contrôle et Coordination des Exportations (Morocco)
EAN	European Article Number / International Article Number or bar code
EEA	European Economic Area
EPOS	Electronic point of sale
ETO	Ekolojik Tarım Organizasyonu, Organic Trade Organisation (Turkey)
EU	European Union
Eurostat	Statistical office of the EU
FADN	Farm Accountancy Data Network
FAM	FranceAgriMer, national organisation for agricultural and marine products (France)
FAO	Food and Agriculture Organisation
FARMA	Farm Retail and Markets Association (UK)
FBS	Farm Business Survey (UK)
FNAB	Fédération Nationale d'Agriculture Biologique, National federation of organic

	agriculture (France)
FR	France
GfK	Association for Consumer Research (Gesellschaft für Konsumforschung)
GIZ	Gesellschaft für Internationale Zusammenarbeit GmbH (Germany)
GM	Green marketing (Czech Republic)
IAEI	Institute of agricultural economics and information (Czech Republic)
IAMB	Instituto Agronomico Mediterranneo di Bari (Italy)
INSTAT	The Albanian Institute for Statistics (Albania)
Interbev	Interprofession betail et viande, the sector organisation for livestock and meat (France)
Interfel	Interprofession des fruits et légumes frais, Sector association for the fresh fruit and vegetable industry (France)
IOA	Institute of Organic Agriculture (Albania)
ISMEA	Istituto di servizi per il mercato agricolo alimentare, the institute for study, research and information on agricultural and agri-food market (Italy)
ISTAT	The Italian National Institute of Statistics (Italy)
IT	Italy
MA	Ministry of Agriculture (Czech Republic)
MAEP	Ministry of Agriculture and Environmental Protection (Serbia)
MAPM	Ministère de l'Agriculture et de la Pêche Maritime, Ministry of Agriculture and Maritime Fisheries (Morocco)
MARDWA	Ministry of Agriculture , Rural Development, and Water Administration (Albania)
ME	Maximum entropy
Med	Mediterranean
MEG	Market information for Eggs and Poultry (Germany)
MFAL	Ministry of Food, Agriculture and Livestock (Turkey)
MIPAAF	Ministero per le Politiche Agricole, Alimentari e Forestali, Ministry of Agriculture, Food and Forestry (Italy)
MOA	Ministry of Agriculture
MOAN	Mediterranean Organic Agriculture Network
N/A	Not applicable
NACE	Is the “statistical classification of economic activities in the European Community” which imposes the use of the classification uniformly within all the Member States.
NGO	Non-governmental organisation
NUTS	Nomenclature of territorial units for statistics
OF&G	Organic Farmers and Growers (UK)
OFIS	Organic Farming Information System (Turkey)
OMSCo	The Organic Milk Suppliers Co-operative (UK)
ORC	The Organic Research Centre Elm Farm(UK)
ORSA	Organic crop statistics Sampling survey (Italy)
PRODCOM	PRODuction COMmunautaire. Prodcom uses the product codes specified on the Prodcom List, which contains about 3900 different types of manufactured products.
RICA	Farm Accountancy Data Network (Italy)

RNM	Réseau des nouvelles des marchés, Network market news (France)
RPA	Rural Payments Agency (UK)
SACL	Soil Association Certification Ltd (UK)
SAD	Single administrative document
SINAB	Sistema d'informazione Nazionale sull'Agricoltura Biologica, national information system on organic farming (Italy)
SPS	Supply balance sheets
SRUC	Scotland's Rural College (UK), previously known as SAC
Synabio	Le syndicat national des enterprises bio, the national organisation for organic businesses
Synalaf	Syndicat national des labels avicoles de France, the national organisation for aviculture (France)
TARIC	Customs data classification system
UK	United Kingdom
UPM	Università politecnica delle Marche (Italy)
UTAP	Union Tunisienne de l'Agriculture et de la Pêche (Tunisia)
VAT	Value added tax
ZMP	Central market and price report office (Germany) – no longer in existence.

Appendix A: Background data collection methods

Production and farm-level prices

In this report "production data" refers to all data concerned with agricultural production including crop areas, livestock numbers, yields and production values as well as production volumes.

Within the EU, data are collected on organic land areas and livestock numbers to satisfy the requirements of reporting to Eurostat, the statistical office of the European Union (see Appendix 2). Generally, these data are collected by control bodies as part of the organic certification process, and are collated by a central organisation (e.g. the national ministry of agriculture or an organisation appointed by them). Some data cleaning/harmonisation may occur and the data are then provided to Eurostat and may also be published nationally. Inspection visits take place on different days on different farms and frequently collect data on cropping areas/livestock numbers on farm on the day of the inspection. The collated data are therefore an amalgamation of these one-off data sets.

Data on organic production yields, values, farm-level prices and other aspects beyond what is currently required by Eurostat[1] are much less likely to be collected (Gerrard *et al.*, 2012). Where they are collected, the data collection is usually carried out by survey but since the surveys are not compulsory (unlike the inspection visits) they may have lower response rates.

Domestic trade/retail and retail prices

Estimates of the total organic retail sales value mainly rely on sales data. Most countries use a mixture of different sources to estimate the total value of the domestic market, including household panels, retail panels, specific surveys and expert estimates (see Appendix 2 and Gerrard *et al.*, 2012). In some countries (e.g. Germany and France which both have well-developed organic markets) additional panels that specialise in organic outlets exist. More information about these can be found in Appendix 2 in the sections on French and German retail data and in the Box below that describes the Biovista panel from Germany. For the majority of countries, sales through non-multiple channels can be difficult to track. Some countries use surveys of producers and independent retailers in an attempt to obtain information about such sales (Appendix 2). However, such surveys are not compulsory and so response rates may be low, meaning that the results may not be statistically representative.

If retail data are collected through questionnaires, interviews or consumer surveys, it is important to be aware of the differences between the stated purchase intention and the actual purchase behaviour. Niessen and Hamm (2006), in a review of such a survey, found that of the 19% of households which stated that they buy organic products at least once a month, in fact only 11% actually bought an organic product. This difference was even clearer among the 42% of households who stated that they buy organic products several times a month, where in fact only 28% actually bought organic products more than once a month. On the other hand, Niessen and Hamm (2006) found that fewer households (11%) see themselves as intensive buyers (more than once a week) than there actually are (18%).

Household panels

In recent years, household panel data have been mostly collected with the help of digital scanners where consumers scan the EAN-code (European Article Number / International Article Number or bar code) of their bought products at home (Niessen, 2008). Some multiples and specialised stores are also able to automatically scan the products at the counter in store, link them to the corresponding

[1] In the future Eurostat will require volume as well as area/number data.

household and send the data directly to a data house for analysis. Products like loose vegetables and fruit, unpacked cheese, bread or eggs etc. that do not carry an EAN-code need to be scanned by the consumer separately and manually at home, using a code-book.

Table A 1: Advantages and disadvantages of household panels

Advantages	Disadvantages
In interviews consumers tend to over-estimate their organic purchases, possibly because their answers are socially motivated (Schantl, 2004; Michels, 2004). Since household panels do not involve face-to-face interviews this social motivation is reduced.	There may be missing data on products consumed before they could be scanned, such as take-away meals, coffee and other beverages (Buder, 2011; Niessen, 2008).
Household panels provide quantitative data, collected over long time periods and therefore allow trends to be analysed (Schantl, 2004).	There may be a lack of full coverage for specific marketing channels. Also coverage may be problematic for specific products that are seen as socially undesirable (e.g. alcohol, sweet snacks).
Companies providing such data very often record socio-demographic variables for their panel members and so it is possible to obtain information about the households and purchasing behaviour (Schantl, 2004).	"Panel effects" can occur, whereby the act of noting their purchases over long periods of time causes consumers to alter their shopping behaviour (Schantl, 2004).
Comparison of organic and non-organic food retail is easier, as the same panel and method can be used for both (Michels, 2004).	

Source: Own summary based on various studies

Retail panels

Retail panels provide data on purchases from the viewpoint of retailers themselves, rather than the consumers. Their data is often based on EPOS (electronic point of sales). Some EPOS data may cover all of the multiples in a country (especially where they are relatively few in number) whereas others may only cover a sample of them.

Table A 2: Advantages and disadvantages of retail panels

Advantages	Disadvantages
They tend to give high coverage of multiple retailers.	Limited or no coverage of independent retailers and direct sales from producers.
Retail panels provide quantitative data, collected over long time periods and therefore allow trends to be analysed.	Errors of classification when retailers set up their EPOS system will be carried through into the panel data and so organic foods may be incorrectly recorded as non-organic and vice versa.
Comparison of organic and non-organic food is straightforward, as they are collected with the same instrument.	Data from such panels is generally only available at a cost, as these are commercial panels carried out by market research companies.
	Compared to household panels, they cannot give information about the consumers.

Source: based on Michels (2004)

Specific weaknesses of panel data when used to estimate the organic market are:

Households may incorrectly classify some products as organic. A study conducted by Niessen and Hamm in 2006 analysed the mistakes made by consumers when wrongly classifying conventional products as organic, and found that older households without children (11-16%) tend to make more mistakes in this

area than younger ones (7-9%). The researchers found that consumers made most mistakes (around 35%) when buying the products through direct marketing, on-farm sales or markets (in fact, more than 70% of all classifying mistakes made in egg sales occurred when bought through direct marketing, 79% for strawberries and 77% for potatoes); and around 5-15% of the products bought in supermarkets or discounters were classified wrongly.

Panels are selected to be representative of the total food market. Even in most well developed organic markets like that of Germany, the organic food market covers less than 10% of the total food market. Because of the small importance of the organic market relative to the total market, the number of households recording organic purchases in a specific product category can be very small (depending on the size of the panel). Small errors, for example in product classification, could potentially have a large distorting impact on the total value of the organic food market.

It is known that a relatively small proportion of households account for a relatively large proportion of total spend in the organic food market (e.g. 20% of households account for 80% of spending in the UK (Buder et al, 2010; SA/WDA/OCW 2004)) which can only partially be predicted from demographic variables (education, age etc.). If, in the composition of such a panel, the number of high spending organic households is over or under represented, this could lead to significant errors in estimating the total market value.

The panel data include information about all food products, not just organic products. Each organic product line has to be classified as such in order to be recorded. Errors in classification can occur both at the level of data analysis in the data houses (mainly for bar-coded product lines), and at the level of the household-panel members (shoppers) for non-bar-coded products.

Bien and Michels (2007) carried out a survey of 500 households from a panel who were asked to keep additional records of their organic purchases in addition to the panel returns. The authors, on behalf of ZMP (Central Market and Price Report Office) and the panel company GfK, used these data to develop a specific methodology for fresh products that is able to minimise misclassifications, based on price differences. For purchases of fresh products a data check is used such that they are only accepted as organic if their price is higher than the specific non-organic threshold price, set on the basis of the monthly price reporting published in Germany. The results of the comparison also provide insights into suitable methods of weighting results of different German panels in order to estimate the total organic market value. This relies on the cross-checking of data from the different panels with other sources (including expert estimates). However, transferring lessons learned from one country to the other is made more difficult because the data houses do not necessarily use the same methods in all countries and data used for cross checks are not necessarily available.

Sales through farm shops and farmers' markets

Panels, unless they are designed to pick up the independent sector (some panels in France and Germany specialise in the organic market and so target specialised organic shops) may miss organic sales through non-multiple routes. Data on sales through farm shops and farmers' markets are more likely, in most countries, to be collected by surveys of producers. Brown (2002) reviewed research on farmers' markets in the USA from 1940-2000 and identified some methodological issues in carrying out research into direct sales including the possibility of over-looking small producers, and the fact that censuses and surveys often rely on farmer memory and farmer openness and so may be open to error (she quotes other researchers who have found that farmers tend to understate rather than overstate sales). Brown (2002) also reviews the various attempts that have been made to assess the economic value of direct sales, demonstrating the large discrepancies that can arise as different methods are used to extrapolate data from a sample to state level. All of these issues apply to assessing the organic sales through

farmers' markets and farm shops with the additional problem of having to separate out organic sales from non-organic sales.

Catering

General catering sales can be split into public catering (e.g. in schools, hospitals, armed forces canteens, etc.) and private catering (e.g. in workplaces and restaurants/ hotels). However, in some countries the division may differ, e.g. in France catering is split into collective catering (this covers any meal served away from the house which is largely paid for by the service provider; public and private. It would include schools, universities, hospitals, retirement homes, prisons, work canteens etc.) and commercial catering (e.g. restaurants).

Retail prices

Retail prices can be collected as part of retail/EPOS or household panel data. Alternatively retail prices can be recorded across a wide range of shops by researchers. As part of the OMIaRD project, prices at consumer-level were surveyed in 19 countries (Hamm *et al.*, 2002; Hamm and Gronefeld, 2004). At least 10 shops were selected in each country, from different regions, to reflect possible price differences. The shops were selected to reflect the importance of different sales channels in the country surveyed (e.g. where the relative importance of general food shops, specialised organic food shops and direct sales were 50%, 30% and 20% respectively then in a sample of 10 shops, 5 would be general shops, 3 specialised organic shops and 2 would be farm shops). The prices were recorded for a number of products including cereal products, livestock products, fruit and vegetables. Conventional prices were collected at the same time as organic prices for the same/similar products and in comparable sales channels so that the organic price premium could be calculated. Hamm and Gronefeld (2004) note that, for comparison between countries it is more meaningful to compare price premiums rather than absolute prices as absolute prices are affected by national rates of VAT (value added tax), the relative importance within each country of different sales channels and the competitive situation between the organic and conventional sectors in each country.

International trade

Data on international trade (import and export) outside the EU, not necessarily recording whether or not the product is organic, is generally collected by the customs/revenue authorities (imports) or other authorities of a country (e.g. for official trade statistics) and makes use of the EU's TARIC classification which is used for customs data. However these data are not generally made public. If it is possible to access such data, there are two main challenges in using it to investigate international trade in organic products:

1. Whether or not a product is organic is not always recorded within the customs documentation or the data. It can be helpful to at least investigate data from 100% organic companies.
2. Exports and imports within the EU may not be recorded. In fact, it may be the case that only exports and imports involving third countries with no equivalency are recorded.

The Organic Regulations[2] set out procedures for importing organic products from **non EU countr**ies into the EU, which are enforced as part of the Customs rules. The Regulation specifies two different approaches:

[2] Council Regulation (EC) 834/2007 and Commission Regulation (EC) 1235/2008

1. production and control requirements comply exactly with Regulation (EU) 834/2007. Proof of compliance is provided through inspections of control bodies that are authorised by the EU. Applications for recognition under this option have to be submitted by 31 October 2014.This compliance approach is not yet implemented and the detailed rules are currently under discussion.
2. production rules and control requirements are equivalent to the EU rules. Equivalency means that applied systems and measures "*are capable of meeting the same objectives and principles by applying rules which ensure the same level of assurance of conformity*." (Art 2 of Regulation (EC) 834/2007. Eequivalency is recognised either by bilateral agreements (i.e. the country in question is included in the EU list of equivalent third countries) or by control bodies (approved and supervised for this purpose by the EU Commission). For a transitional period until 1 July 2014 equivalence can also be confirmed by Member States authorities at the request of an importer located in the EU (import authorisation).

To make the organic status of an imported item clear it is necessary to add it to the customs documentation; this has been done in Italy, France and Serbia, for instance, by adding information on the organic status of a product to box 44 of the SAD (Single Administrative Document).

Import authorisations were widely used under the previous organic regulation (EEC2092/91) (Sanders, 2013, Chapter 3). EU Member States have been granting around 4 000 import authorisations annually (European Court of Auditors, 2012) and there are around 1 600 approved importers in the EU, mostly located in Germany, the Netherlands, the United Kingdom, Denmark, Sweden and France (Sanders, 2013). Import authorisations have been explored as a source of data on imports into the EU.

An alternative approach for collecting data on international trade, is to survey various organic operators (importers, exporters, organic producers, processors, wholesalers and retailers) regarding amounts that they import/export. This has the advantage that it will give data on intra-EU trade as well as trade outside the EU. This approach would require reasonable response rates to the surveys which may be difficult to achieve if they are not compulsory. Both Agence Bio and AMI used this approach but it was more straightforward for Agence Bio as they could contact all the main organic market operators since these were identified using the notification system in use in France (See Appendix 3). For AMI this was more difficult and they estimate that their survey was sent to one third of all importers and of those one third responded. The Czech Republic also carry out a survey of actors within the organic market which could be used to provide data on international trade especially within the EU.

However integration of organic into existing trade statistics, differentiating between organic and conventional products in the national export/import statistics, as is already done in Denmark (see Appendix 4), would be, in many countries, the easiest way to collect organic international trade data.

Appendix B: Current status of data collection as at 2012/2013

In the first phase of the case study work, a report was produced for each country, describing the current status of data collection within the country, broken down by the main topics of production data (areas/numbers, volume and value), retail market (volume and value), prices (farm gate and consumer), and import and export data. Summarised versions of the reports can be found in Appendix 2. The reports were based on information obtained in earlier parts of the OrganicDataNetwork project (e.g. the survey of market data collectors), discussion with stakeholders within the individual case study countries, and desk-studies. The reports include a table for each data type, which summarises the data collection against Eurostat's data quality dimensions of accuracy, coherence and comparability, accessibility, and timeliness (Eurostat, 2012).

In general, production-related data (especially areas/numbers of livestock) were most commonly collected (usually by CBs as part of the certification process) and international trade data were very rarely collected. With regard to market data, data on sales through multiples tended to be available albeit at a cost (usually through market research companies employing household or retail panel methods to follow the market); whereas data on sales through specialist shops, farmers' markets and catering sales were scarce to non-existent in most of the case study countries. International trade data were not often collected and where they were available it was often only with regards to non-equivalent third countries. Table B-1 summarises the data collection in the case study countries with the remaining Appendix B providing much greater detail.

In the Mediterranean region data collection varies, with some countries (e.g. Serbia) beginning to align their data collection with EU requirements and others having a less developed data collection. Many of the countries within the Mediterranean collect data on production crop areas and livestock. Export data is given more emphasis than in some EU countries due to the relative importance of export although some countries (e.g. Lebanon) do not follow this trend and instead have a more developed national market for organic food. In most of the MOAN member countries, however, data collection is still at a relatively early stage.

Table B 1: Data collection in case study countries in 2011/12

	UK	DE	FR	CZ	IT
Production data	Crop areas and livestock numbers. Producer surveys in Scotland and Wales.	Crop areas and livestock numbers. Volume data collected by AMI are not yet officially recognised.	Crop areas and livestock numbers. Volume data are collected by Agence Bio from a number of sources.	Crop areas and livestock numbers. Volume data and prices at farm level.	Crop areas and livestock numbers.
Domestic trade/retail	Value data collected by retail panel and surveys of multiple retailers and independents.	GfK household panel data, Nielsen retail panel data for multiples, BioVista and Klaus Braun for organic shops. Prices are collected on a monthly basis by AMI using GfK household panel data.	Survey for specialised supermarkets, for direct sales by farmers and processors and for supermarkets. Symphony IRI data for general supermarkets; Kantar data for fruits, vegetables and eggs.	Questionnaire in four formats: producers, distributors, producer/distributors and retailers. Retail price data are collected every two months by the Green Marketing Agency.	ISMEA makes use of GfK-Eurisko household panel data whereas AssoBio makes use of expert opinions and company data.
International trade	Data are not currently published.	Import data collected in a research project for 2009/10 and again, using the same methods, for 2010/11 and 2012/13.	Agence Bio and AND international estimate the value of imports and exports using a survey of processors and other organisations.	Data are not currently published.	Data on imports are collected and published by SINAB but do not cover trade from equivalent third countries.
Farm-level prices	Limited data collected as part of Scottish and Welsh producer surveys. Soil Association publishes some expert estimates on a regular basis	Collected and published weekly by AMI.	FranceAgriMer collect some data on prices of milk, fruits, vegetables and cereals.	Collected as part of the surveys that collect production data.	Collected annually by ISMEA. Italian commodity exchanges also provide weekly price data for cereals, industrial crops, fruit and vegetables.

UK (by Catherine Gerrard[3])

The information below is based on discussions which took place at a meeting of UK data collectors held at the Organic Research Centre (ORC) on 18th July 2012 supplemented with information received during a meeting at the Soil Association on 12th November 2012 and at a meeting of Defra and the UK control bodies (CBs) on the 20th November 2012 at ORC.

Note that in 2013 the Scottish Agricultural College (SAC) became Scotland's Rural College (SRUC) after merging with three other agricultural colleges in Scotland. Also in 2013, the Soil Association made the decision to move from using Kantar WorldPanel data (as it had done previously and as described below) to using Nielsen electronic point of sale data.

Production data

Production area/livestock number data

Production data, particularly area and number data (areas of crops, numbers of livestock) are more commonly collected than other data types. The data are collected, with respect to organic farming, by the various control/certification bodies (Organic Farmers and Growers Ltd, Scottish Food Quality Certification, Organic Food Federation, Soil Association Certification Ltd, Biodynamic Agricultural Association, Irish Farmers and Growers Association, Organic Trust Ltd, Quality Welsh Food Certification) as part of the certification process and are fed through to the Department for Food and Rural Affairs (Defra) who pass the data to Eurostat and publish a UK document on organic farming statistics, "Organic Statistics". The data are sent to Defra in January of the year following the year to which they refer (e.g. 2011 data forwarded to Defra by January 2012) to form the annual return required of Defra under Eurostat Commission Regulation No. 889/2008. The data published by Defra currently include land areas (cereals, other arable crops, and fresh vegetables), livestock numbers (poultry, cattle, pigs) and producer numbers. All data includes fully organic and in-conversion holdings.

These are the data collected in annual inspections carried out by the CBs. As a result, each set of data from an individual farm is based on a snapshot of that farm on the particular day it was inspected and the collated data do not represent the whole UK situation on a particular day as each inspection could have been carried out on a number of different days throughout the year. A further issue with the data is that, while Defra do provide a template, some CBs use categorisations which are different from those used by Defra. As a result of the lack of harmonisation, the Defra statistics department must spend some time cleaning the data which impacts on the timeliness of their publication. The publication is usually issued in the summer of the following year.

Additional data on production areas and numbers may also be collected by Defra as part of their Agricultural Census/Survey and Farm Business Survey (however the organic sample can be very small) and by Scotland's Rural College (SRUC) and Aberystwyth University during their producer surveys.

[3] The Organic Research Centre, UK

Table B 2: UK production (livestock number and crop area) data quality assessment

Quality assessment	Description
Accuracy	
Data source	CB collated by DEFRA
Methods of data collection	Inspection records
Sample size	All certified farms
Estimated coverage	100%
Comments	Collection through the year, checked by DEFRA
Coherence and comparability	
Coherence and comparability of the data collection method	Similar data collection methods are used for organic throughout Europe Non-organic data are census based;
Disaggregation of data	Data are disaggregated into each of the countries within UK.
Accessibility	
Voluntary or compulsory to provide data	Compulsory: Data are collected as part of control process and CBs have to provide data to DEFRA
Availability of data	Summary statistics are available for free
Format of publication	Summary statistics are published on-line
Timeliness	Up to 6 months delay
Frequency of data collection	Collected annually for 31 Dec closing date
Frequency of publication	Annual publication scheduled in July of the following year
Comments	

Production volumes, yields, and value data

Organic production data (volume and value) is collected by Scotland's Rural College (SRUC) and Aberystwyth University as part of their producer surveys. There is currently no annual survey of organic producers in England or in Northern Ireland.

As part of an organic market link project funded by the Scottish Government, SRUC produces an annual report based on a survey of organic producers. The aim of the project is to improve information flow between producers and the marketplace, and to improve the marketing of Scottish organic produce. It particularly focuses on grain and red-meat produce. In 2011-12, the survey collected information on production of beef, lamb, pigs, table birds, eggs, grain, pulses, fruit, and vegetables and accounted for 85% of Scottish organic producers. Similar data are collected every year[4]. The survey results are not extrapolated to cover all producers.

The survey is a postal survey sent to Scottish organic producers and collects data for the year running from July to June (e.g. the 2011-12 survey ran from July 2011-June 2012). 50% of the survey data are collected via post, 50% is collected via phone. Broken down to a monthly basis, the producers are asked to provide data on what they have sold in the last 6 months and what they expect to sell in the following 6 months.

[4] The most recent market report covers the period from July 2013 to June 2014 and is available at http://www.sruc.ac.uk/downloads/file/1940/organic_market_link_producer_survey_2013-14

The annual report gives a sector and market update, based on contact with the trade and information from the SRUC's annual organic producer conference, and then gives production information based on the survey responses. The production information which is collected includes:

- monthly production patterns,
- geographical production patterns,
- information on the number of producers and how it compares with previous years,
- information on grains and pulses about the breakdown of production between home-use, and produce available for trading,
- information about producer's plans with regards to remaining as licensed organic producers.

The 2011-12 survey also provides a plot of the organic premium over conventional prices for finished beef cattle and finished lamb on a monthly basis from January 2011- February 2012.

Similar surveys are carried out in Wales as in Scotland, but they are carried out in November of each year. In contrast with the Scottish data, the Welsh data are not partly forecast (i.e. consists entirely of actual figures). It is also based on a postal survey, followed up with phone calls to encourage missing respondents (although for the 2011 survey onwards it was decided to conduct the survey entirely by phone call), and achieves a 60-70% response rate for the main sectors. The survey response rate is used to extrapolate up the data to give an estimate of the land areas and livestock numbers for all organic production in Wales. This gives an estimate but is subject to potential error so a full census would give a more accurate set of values (but is not possible on a voluntary basis).

The annual report on the Welsh survey gives information about[5]:

- organic certified land areas (in comparison with Defra data to ensure consistency), livestock numbers,
- sales data (including the numbers of organic livestock being sold as conventional, sales routes),
- livestock feed and fodder (concentrate feed use, proportion bought-in, prices and availability as rated by the producers),
- agri-environmental scheme participation
- and producer views of the future (e.g. opinion about current prices, plans to leave the organic sector).

The data are disaggregated into data on cereals, other arable/fodder crops, potatoes, horticulture (excluding potatoes), tillage, temporary grass, permanent grass/rough grazing, woodland/other, beef cows, dairy cows, other cattle, ewes, other sheep, laying hens, table birds, other poultry, sows, other pigs, other livestock. The livestock are also split, for some questions, into breeding, growing and replacement livestock. Price data are collected for beef and lamb (broken down by month) and also for eggs (an average figure was given in the 2011 report but it was also commented that there is a large variation in prices) and milk (where an estimate price is given although it is commented that organic milk prices are not readily available due to commercial sensitivity).

Additional production volume and value data may be obtained from Defra's Agricultural Census/Survey and Farm Business Survey. However, these do not cover just organic farming and therefore the organic sample can be very small.

[5] The most recent market report covers the 2013 survey and is available at http://www.organiccentrewales.org.uk/uploads/producer_survey_report_2013.pdf

In the near future Eurostat will require some yield data (e.g. volume data) for livestock production in addition to the livestock numbers and crop areas that they currently collate. Defra currently plans to estimate these with the help of experts so as not to over-burden the CBs with further data requirements.

Table B 3: UK production (volume and value) data quality assessment

Quality assessment	Description
Accuracy	
Data source	Scotland's Rural College (SRUC) and Aberystwyth University/Organic Centre Wales
Methods of data collection	Telephone surveys
Sample size	Wales 2012 survey: 647, Scotland 2012-13 survey: 377
Estimated coverage	Wales: 60-70%, Scotland: 81%
Comments	The main gap is the lack of similar data for England and Northern Ireland.
Coherence and comparability	
Coherence and comparability of the data collection method	The Welsh survey asks about production in the last 12 months and future intentions with regards to remaining organic. The Scottish survey asks about production in the last 6 months and predicted production in the next 6 months.
Disaggregation of data	Split by enterprise (e.g. cropping, beef, sheep)
Accessibility	
Voluntary or compulsory to provide data	Voluntary.
Availability of data	Results are published and are available from the webpages of the data collecting institutes.
Format of publication	Online reports.
Comments	No such data exist for England and Northern Ireland.
Timeliness	
Frequency of data collection	Annual.
Frequency of publication	Annual.
Comments	Publication is within a few months of data collection.

Domestic trade/retail data

Retail volumes and values

Retail value data are collected by the Soil Association using Kantar retail data and additional in-house surveys of Soil Association licensees. These data form the basis of their Organic Market Report.

In 2013, the Soil Association made the decision to move from using Kantar WorldPanel data (as it had done previously and as described below) to using Nielsen electronic point of sale data.

The Kantar Worldpanel data are based on monitoring the shopping habits of over 25,000 households in Great Britain (30,000 in September 2012). Kantar Worldpanel also have the ability to ask their panel members additional questions using questionnaires which, along with demographic data that they hold, can give an insight into motivations behind shopping habits/changes in shopping behaviour. The households scan their purchases and the data from the scanners is collated and analysed by Kantar Worldpanel. It is thus possible that impulse purchases (such as a chocolate bar at lunchtime) may be

missed and also that purchases from e.g. farm shops, box schemes may be missed. There is a booklet of additional codes for loose items that the households can use but it is possible that some organic purchases of this type are not recorded. Some alternatives to multiple sales are likely to be picked up by Kantar Worldpanel data (e.g. they do pick up sales through Ocado – a UK-based online supermarket). The Kantar Worldpanel data can be used to give price trends as well as trends in shopping habits. It is generally not broken down on a regional basis as regional disaggregation can lead to small samples and questionable representativeness of the results. Also, Kantar Worldpanel only covers households.

The Soil Association carries out a survey of their top 100 licensees by turnover. Among other questions they are asked to give an indication of what proportion of their turnover comes from multiples, independent retail, and catering. Thus the responses from these larger licensees can be used to inform some of the categories of the Organic Market Report.

The Soil Association produces an organic market report annually. The market report data are split into 4 main sub-categories:

- Multiples
- Independent retail
- Health and Beauty
- Textiles

These will be discussed in turn as the data collection/analysis approach differs for each.

Multiples

A direct relationship exists with the multiples and therefore the Soil Association can get actual figures for organic sales for the calendar year by January of the next year. Usually they get them from at least 5 of the main supermarkets. They believe that >75% of the market is covered by the responses that they get. The Soil Association used to request a detailed breakdown of these figures but some respondents gave very detailed figures whereas others gave just a total and so they ceased requesting the detailed breakdown as it put a lot of pressure on the more diligent organisations to provide data that then couldn't be used. The data are always aggregated and they never identify individual turnover, only the rate of growth.

Soil Association use actuals from previous years multiplied up by the growth rates supplied by Kantar to cover those multiples that have not given actual figures and to double-check the actuals they have received. In general they take the view that absolute values from Kantar are less accurate but the trends are accurate.

The other use of Kantar data the Soil Association make is that once they have tallied up the biggest seven multiples they use Kantar's assessment of the market share for multiples to gross that figure up to give the full multiple total. E.g. if the biggest seven multiples cover 87% of the multiples market and have a total organic sales figures of x then the total organic multiples sales figures for the market report will be calculated as x*100/87.

Independents

The box sales and home delivery category includes not just box sales but also e.g. Ocado (a UK-based online supermarket). The Soil Association obtain actual sales figures from the two biggest box sales companies (Riverford and Abel&Cole) and from Ocado and other leading independents. They also carry out a survey of their own licensees to pick up smaller operators (in their opinion this is the weaker section as the survey has a low response rate). They generally get responses from 10-20 small

independents. The survey doesn't get participants to report precise turnover but rather the band that their turnover is in (in the future they could be asked for the precise actual turnover figures). Then the proportion in each band is used to extrapolate performance figures for the sector as a whole. Since small independents are only a small section of the market the lower confidence in their data is not considered cause for concern. In general they consider box sales and home delivery to be the most robust section of the independents' data.

In the survey of independents the Soil Association ask about whether they make sales through farmers' markets, box schemes, farm shops and /or high street shops. However, very few respond that they make sales through farmers' markets or farm shops. Thus, the data are quite minimal in this area. In the past a survey was carried out by FARMA (Farm Retail and Markets Association) of their affiliated farm shops and markets which gave a total estimated turnover figure and an idea of what proportion of sales were organic. The questions in the survey were: How many regular stall holders are there? How many are organic? What is the total turnover of the market? The total turnover was multiplied by the proportion of stall holders that were organic to give an estimate of organic turnover. Since then a % growth or decline figure is applied to this estimate on a yearly basis and double-checked against the returns of the Soil Association's survey of independents.

This "other independent retailers" category includes Planet Organic (the UK's largest fully certified organic supermarket) and As Nature Intended (a high street retailer of organic food) who provide some actuals. Kantar data includes Londis, Mace and Spar (small supermarkets) who are also included in this sector. Each year the rate of growth/shrinking of the market is applied to the previous year's figure. The Kantar data, actuals and an idea of how independent high street shops are developing are combined to provide the growth rate. The suspicion is that this sector may be over-valued.

Table B 4: UK retail data quality assessment

Quality assessment	Description
Accuracy	
Data source	Multiple sources are combined: data from Kantar (Nielsen from 2014 onwards) and in-house surveys.
Methods of data collection	Panel detail (formerly household panels and now retail panels), online surveys.
Sample size	Kantar: >25,000; multiple retailers: >=5
Estimated coverage	Multiple retailers: >75%
Comments	The Soil Association are mostly content with the data they have for multiple sales channels but would like to improve data on sales through other channels (farm shops, farmers' markets, box schemes) as well as data on health and beauty and textiles.
Coherence and comparability	
Coherence and comparability of the data collection method	Panel data gives comparability year on year.
Disaggregation of data	Some basic split between product categories e.g. dairy, meat, fruit and vegetables, but not in great detail (e.g. not as detailed as apples, bananas, pears).
Accessibility	
Voluntary or compulsory to provide data	Panel data are purchased. Surveys are voluntary.
Availability of data	Organic Market Report is available for free.

Format of publication	Organic Market Report (hard copy and online)
Timeliness	
Frequency of data collection	Annual
Frequency of publication	Annual
Comments	Data publication is very timely – publish in March with data for the previous calendar year.

Health and Beauty

The health and beauty sector figures are calculated using the turnover actual figures from SACL (Soil Association Certification Ltd) and aggregating the data to get the overall figure. The data are corrected for export figures (since the export market is stronger than the UK domestic market) and for sales through wholesale rather than retail. Retail sales are left as they stand. Wholesaler sales are increased by an amount which reflects retail mark-up before being aggregated with the other figures to give the overall total.

Textiles

The UK organic textile sector consists mostly of cotton with a small element from wool sales. Wool sales are easily covered as the wool board gives good, accurate figures. Cotton sales figures are produced by adding the growth rate of the market to a baseline figure from several years ago. The issue with cotton data comes from the fact that some products are entirely organic but others may include organic cotton in a mix of cottons and so the product is not marked as organic for retail purposes.

Catering volumes and values

Catering market data (values) are estimated for the Soil Association's Organic Market Report, however, this is an area where they feel that there is room for improvement. For the companies involved in catering, the organic market does not cover a large proportion of their business and they have no time to give figures. However, since they have no differentiated strategy for organic food, the market report uses the percentage increase or decrease for the catering market as a whole as the likely rate of increase or decrease for the organic sector within that market (the effect of the Soil Association's Catering Marque is currently small). Thus the figure is based on a growth rate taken from the market as a whole and double-checked against the survey of independents, applied to the proportion of the catering market that is organic. The Soil Association believe that this approach means that this sector may be undervalued in the market report (several fast food/coffee chains now use organic milk e.g. MacDonalds, Pret-A-Manger, and adding up their sales alone may get near to the figure reported in the Market Report).

Table B 5: UK catering data quality assessment

Quality assessment	Description
Accuracy	
Data source	Soil Association
Methods of data collection	Estimate based on previous value and movement in overall catering market.
Sample size	N/A
Estimated coverage	N/A

Comments	Soil Association feel there is room for improvement, but it is difficult to obtain figures from the main actors within the market.
Coherence and comparability	
Coherence and comparability of the data collection method	Estimate
Disaggregation of data	None
Accessibility	
Voluntary or compulsory to provide data	N/A
Availability of data	Published in annual Organic Market Report by Soil Association.
Format of publication	Online and hard copy report.
Timeliness	
Frequency of data collection	N/A
Frequency of publication	Annual

International trade data

International trade data for organic products is not currently collected within the UK.

Prices

Price at farm level

Data on organic prices at farm level for Scotland and Wales are collected annually by SRUC and Aberystwyth University as part of their producer surveys.

The Soil Association also provides some price data on their website. They collect monthly to quarterly producer prices for fruit and vegetables, eggs, dairy, meat, and cereals. The frequency depends on the product. Price collection for fruit and vegetables, eggs, and dairy includes wholesale prices and also farm shop prices and retail prices. The Soil Association collates these data from various sources: surveys of key producers, traders, feed mills, and slaughterhouses, and a webpage where retail prices are compared.

Table B 6: UK farm-level price data quality assessment

Quality assessment	Description
Accuracy	
Data source	SRUC and Aberystwyth University / Organic Centre Wales
Methods of data collection	Telephone surveys
Sample size	Wales 2012 survey: 647, Scotland 2012 survey: 377
Estimated coverage	Wales: 60-70%, Scotland: 81%
Comments	The main gap is the lack of similar data for England. Only limited price data are collected.
Coherence and comparability	
Coherence and comparability of the data collection method	Only limited price data are collected e.g. for milk and eggs. Other enterprises are asked whether organic price is sufficient to continue in organic production.
Disaggregation of data	Split by enterprise (e.g. cropping, beef, sheep)

Quality assessment	Description
Accessibility	
Voluntary or compulsory to provide data	Voluntary.
Availability of data	Results are published and are available from the webpages of the data collecting institutes.
Format of publication	Online reports.
Comments	
Timeliness	
Frequency of data collection	Annual.
Frequency of publication	Annual.
Comments	Publication is within a few months of data collection.

Retail price

Data on organic retail prices are collected by Kantar Worldpanel (replaced since the 2014 market report by Nielsen) but at present are not evaluated separately as part of the Soil Association's market report.

Data gaps and issues

The main data gaps and issues that exist at present in the UK appear to be:

1. There is a lack of harmonisation in Certification Bodies' (CBs) data that are provided to Defra. This results in a time delay in publication of such data that impacts on its usefulness to stakeholders.
2. There is no producer survey carried out in England or Northern Ireland and the Welsh survey may be at risk due to funding constraints. Producer surveys can collect information such as the number of organic animals being sold as conventional, producer intentions for the future, and prices received by producers, which can provide additional information on the market and potential future market trends. For example, large numbers of producers planning to leave organic certification may imply a future reduction in supply of certain organic products, which in turn may result in higher costs to consumers.
3. There is limited data on sales through non-multiple sales channels such as box schemes, farm shops, and farmers' markets. It has been suggested that sales of organic produce through the multiples may partly drop due to sales through other routes increasing. However, it is difficult to analyse trends to see if this is the case due to insufficient year-on-year data on sales through these alternative routes.
4. There is no data on organic products in supermarkets: line availability (range) and product availability on the shelf. It has been postulated that organic sales are limited by availability, but the lack of data on this makes it impossible to test the correlation.
5. There is limited data on catering sales.
6. There is no data on organic imports to the UK and exports from the UK.

Germany (by Diana Schaack[6])

AMI publishes an annual report "Markt Bilanz Ökolandbau". This book (approx. 200 pages) contains a market overview of the different organic markets in Germany, and also a European market overview that is compiled annually by FiBL and AMI. The book contains enormous numbers of data tables on:

1. Sales volumes and values of organic fresh products – mainly according to GfK data.
2. Development of organic farming and production.
3. Producer prices - monthly and annual time series.
4. Consumer prices.
5. EU and Europe – retails sales data (total only) and production.

Production data

Production area/livestock number data

Production data, particularly crop areas and livestock numbers, are more commonly collected than other data types. In accordance with EU regulation No. 889/2008 of 5 September 2008, the Federal Office for Agriculture and Food (BLE) collects data on the total organic agricultural land and the number of organic enterprises in Germany to deliver to Eurostat. As Germany is a federalist country, each of the 16 federal states have to collect these data from the control bodies and deliver a single federal state dataset to the BLE every year by the end of April. BLE then has got time until the end of June to check and match this data and send it to Eurostat. The federal states collect the data from the control bodies as part of the certification process. Unfortunately the Ministry of Food and Agriculture (BMEL) has, until now, only obliged the control bodies to deliver data about the total agricultural land (in conversion and converted together) and the number of enterprises. There is no split into conversion area and fully converted area, and no data on land use, livestock numbers, or production volumes although this is required by the EU regulation. However BLE annual production data gives information on the total organic agricultural land because it works like a census.

The fact that these data are not disaggregated into land use types and do not contain data on animal husbandry is the reason why since 1999 the former ZMP (Central Market and Price Report Office) and since 2009 AMI directly collect data from the control bodies in Germany about land use and animal husbandry (AMI structural data survey). Because data delivery is voluntary except for an expense allowance, not all the control bodies take part in this annual survey. Usually approximately 10 to 12 control bodies take part, which cover about 85% to 90% of the area and 80% to 85% of the farms. The missing area and number of animals has to be estimated by AMI according to the growth rates delivered by the participating control bodies. AMI collects data about land use and the livestock numbers annually and, together with the producer prices and average yields of the different crops, this allows the farm gate value of organic production to be estimated.

Additionally, the Federal Statistical Office collects crop area and livestock number data every three years, but not in as much detail as the survey by AMI. Instead it shows a regional split into the federal states. From 2012 onwards the statistical office also collects detailed data on fruit and vegetable production (area and volumes) which is more detailed than data from the structural data survey.

[6] Agricultural Market Information Company (AMI), Germany

Furthermore, the Federal Statistical Office collects annual data on the number of organic laying hens within their annual livestock census. Moreover, there are monthly data on organic milk deliveries collected by the Federal Office for Agriculture and Food (BLE) within their milk delivery statistics.

ZMP and AMI have developed a database that makes data comparable over the years and also between the different control bodies.

Table B 7: German production (crop areas and livestock numbers) data quality assessment

Quality assessment	Description
Accuracy	
Data source	Control bodies of the 16 federal states and AMI survey data
Methods of data collection	The 16 federal states deliver the single federal state data (area and number data) to the BLE. Land use and animal husbandry survey (AMI structural data survey among the CBs).
Sample size	BLE 100 % for the total area, AMI 85-90 % of land use types
Estimated coverage	BLE 100 % % for the total area and number of farms, Voluntary survey - 85% to 90% of the area and 80% to 85% of the farms are covered (based on data from 10-12 CBs)
Comments	There is no data on conversion area, land use, or the numbers of animals in the official data collection by BLE. Therefore the AMI structural data survey was developed with coverage of 85 to 90 % of the area. The gap between the total agricultural land and the land use that has to be estimated as discussed above. The missing area and number of animals is estimated by AMI according to the growth rates of the participating control bodies.
Coherence and comparability	
Coherence and comparability of the data collection method	Part of the certification process, survey. Similar methods based on CB data are used in all countries
Disaggregation of data	
Comments	ZMP and AMI have developed a data base that makes data comparable over the years and also between the different control bodies.
Accessibility	The 2014 AMI "Markt Bilanz Ökolandbau" (in German) can be ordered for EUR 206 (print version) or EUR 303 (digital version). Only production data is available for free here: http://www.ami-informiert.de/ami-maerkte/ami-weitere-maerkte/ami-maerkte-oekolandbau/bio-strukturdaten.html
Voluntary or compulsory to provide data	Total agricultural land and the number of enterprises is compulsory (collected by BLE). AMI survey is voluntary.
Availability of data	Published online and in print.
Format of publication	Annual Report "Markt Bilanz Ökolandbau"
Timeliness	Total area data is published by the end of June in the following year. Results of the structural data survey are published in around September of the following year.
Frequency of data collection	Annually: Data delivery from the 16 federal states to BLE by the end of April, BLE then has until the end of June to check and match this data and send it to Eurostat.
Frequency of publication	Annually

Production volumes, yields, and value data

The estimate of the production volume of a few basic product groups such as vegetables, fruit, potatoes and also pork, beef and poultry meat is part of the annual AMI structural data survey. The production is calculated using area data and average yields or carcase weights in that particular year. For cereals, AMI carries out an additional survey among farmers, with the help of the German Farmers Association, asking for their average yields of the different crops in the federal states. Production volume is calculated using the yields and area data in the different federal states.

Another part of the AMI structural data survey is a calculation of the production value on the basis of farm gate prices that AMI collects for many products.

Until now all the data collected within the AMI structural data survey is not delivered to Eurostat, although land use and livestock number data are required by the EU regulation. AMI has tried to convince the Ministry of Food and Agriculture (BMEL) to make the data officially recognised but it seems to be a long way from a decision, even taking into account that the Federal Office for Agriculture and Food has been financing the survey since 2010.

The Federal statistical office has included organic berries and vegetables into their overall data collection in 2012 and 2013 and determined production volumes as part of this.

Table B 8: German production (volumes and values) data quality assessment

Quality assessment	Description
Accuracy	
Data source	Control bodies and extra survey among farmers
Methods of data collection	AMI structural data survey, estimate of production volume of a few basic product groups based on area data and average yields or carcase weights, and calculations of the production value on the basis of farm gate prices that AMI collects. Additional survey with the German Farmers' Association for average crop yields. Since 2012 organic berries and vegetables production is part of the overall berries and vegetable data collection with comparable detailed data.
Sample size	
Estimated coverage	AMI structural data survey: approximately 10 to 12 CBs take part, which cover about 85% to 90% of the area and 80% to 85% of the farms.
Coherence and comparability	
Coherence and comparability of the data collection method	Survey
Disaggregation of data	
Comments	The structural survey data are not officially recognised, statistical office data is recognised.
Accessibility	Free downloads here: http://www.ami-informiert.de/ami-maerkte/ami-weitere-maerkte/ami-maerkte-oekolandbau/bio-strukturdaten.html https://www.destatis.de/DE/ZahlenFakten/WirtschaftsbereicheLandForstwirtschaftFischerei/ObstGemueseGartenbau/Tabellen/OekologischesGemuese2012.html
Voluntary or compulsory to provide data	Voluntary
Availability of data	For free

Format of publication	Annual report
Timeliness	
Frequency of data collection	Monthly for animals for slaughter/ Annually for cereals production
Frequency of publication	Annually

Domestic trade/retail data

Retail volumes and values

Retail value, volume data and market penetration data are collected by AMI using GfK household panel data, which are the basis of their monthly to quarterly reports on the market development of fresh products. During the year, AMI regularly analyses and cross-checks GfK household panel data for fresh products. AMI purchases monthly GfK raw data for organic and conventional meat, meat products, poultry, eggs, cheese, fruit, vegetables, potatoes, bread, vegetable oils, milk, and milk products. This is part of an AMI-GfK contract; AMI buys data but also cross-checks them according to promotions in the multiple chains and also with the development of the product markets.

The proportion of the overall market that consists of organic produce is calculated according to annual consumption data from the Federal Statistical Office.

The German organic market is estimated annually by the Arbeitskreis Bio-Markt that is coordinated by AMI. AMI set up the task force (Arbeitskreis Bio-Markt) together with the BÖLW, the German umbrella association for the organic sector; the panel institutions GfK, Nielsen scan track, BioVista and Klaus Braun; and also the Universities of Kassel and Weihenstephan-Triesdorf. A piecemeal approach is used for the annual estimate of the market. The GfK household panel data are used for fresh products and dairy in the supermarkets and for all products in the "other sectors" such as bakeries, butchers, box schemes, farmer´s markets and farm shops. Additionally, Nielsen scan track data are used for organic packed items in the supermarkets. BioVista trade panel data and Klaus Braun trade panel data are used for estimating the size of the organic shops. More information about each of these data sources is given below. The task force has been working since 2010 (for estimate of 2009 data) on a regular and voluntary basis.

There are two issues with that estimate:

1. At present, all of the panel institutions give their data to the other members of the task force for free. This may not be possible in the long-term for panel institutions that have to earn money out of selling their data.
2. The butchers, bakeries, farmers' markets, farm shops and box schemes data from the GfK household panel shows too much variation and it is not clear how much of the market is covered. For the multiples, there is always a coverage gap which makes it difficult to estimate the whole market.

The GfK (Gesellschaft für Konsumforschung) has been running a household panel since 1957 and monitors the shopping habits of 30,000 households in Germany. Once a year, the GfK asks their panel members additional questions which, along with demographic data that they hold, can give an insight into motivations behind shopping habits / changes in shopping behaviour. The households scan their purchases and the data from the scanners is collated and analysed by the GfK. There is a codebook of additional codes for loose items. GfK has selected the most reliable households from within this main panel for another 13,000 household panel, especially for fresh loose items like fruit and vegetables along with so-called "organic-clever" households that mostly correctly identify the organic products as

organic. As the result of a project in the Federal Organic Farming Scheme and other forms of Sustainable Agriculture (BOELN) by Bien and Michels (2007), a system of distinguishing organic and conventional products by comparing process with lower price thresholds for organic products has also been introduced. For examples, organic apples cannot be cheaper than 1.90 EUR/kg unless there have been promotions in one of the multiples in that week. AMI is continuously carrying out these cross-checks for the GfK to make the organic data more reliable.

The GfK data can be used to give price trends as well as trends in shopping habits. It is indeed used by AMI to publish weekly consumer prices for conventional products and monthly consumer prices for organic items. GfK data can be broken down into the 7 main regions in Germany, but despite the large national sample size, regional disaggregation can lead to small samples and questionable representativeness of the results especially with regard to organic products. Also, like all household panels, the GfK only covers household purchases, so produce sold to catering outlets from the supermarkets, for example, would not be picked up in GfK data. Also small impulse purchases like a bread roll or ready-to-go salad at lunch time are missing to a large extent.

Due to the relatively high coverage gap for organic (66 % coverage) and conventional (76 % coverage) products, in February 2013 GfK adapted their weighting methods for extrapolating from 30,000 or 13,000 households to the whole of the German market and has published a totally new data set covering 2013 and the previous year. Small purchases and specialist shops like bakeries, butchers, farmers' markets, and organic stores are weighted much higher. Also shopping habits of the individual households are taken into account and it is assumed that certain little purchases that the household has made at the beginning of being a panel member are likely to continue but may not show any longer as it is assumed that panel members tend to get tired of scanning purchases after a long time doing so. This new methods is called "coverage weighting and penetration correction" and is likely to have made the data more reliable. The issue is that all the sales figures have been increased and nobody knows to which degree. There is still a coverage gap but its extent has to be investigated anew.

The Nielsen Company has been running a retail panel in the German multiples for more than 50 years. It collects scanner data directly from the shops. Thus coverage in their trade panel can always be 100%. On the other hand, there is no knowledge about the customers and their behaviour. Trade panels work especially well for all packed bar-coded food but have gaps for loose items like fruit and vegetables. Because the trade panel covers 100% of the market, it is used in the market estimate for packed food in the supermarket. Nielsen does not collect data in organic shops.

BioVista, in contrast, was founded in 2003 specifically to fill the gap created by having no trade panel data for organic shops. They now run a trade panel in about 400 organic shops and health food shops in Germany. Unlike Nielsen, they also collect data for loose items like fruit and vegetables, and also loose meat and cheese. These data are not very detailed but provide the total sales of the shops and also allow an estimate of the whole organic market. The participating shops, in return for their participation, receive a monthly evaluation of their sales of all the articles compared to the average of all the shops. There is 100% coverage with BioVista data for all packed bar-coded food in the organic shops and a good estimate for sales of fresh loose food. However, BioVista tends to overestimate the market because its panel members are mainly comparatively well-developed shops with scanner cash points.

The communication consulting company Klaus Braun has collected quarterly sales data from organic shops in Germany for many years. It focuses more on the total sales in different classes of shops than on single products or product groups. It only distinguishes between food and non-food products. Compared to BioVista, Klaus Braun's market barometer has more organic shops in the panel and not only those

with scanner cash points. Therefore both panels complement each other well in estimating the organic market.

Table B 9: German retail data quality assessment

Quality assessment	Description
Accuracy	
Data sources	GfK household panel data (Retail value, volume data and market penetration data); Nielsen scan track data (organic packed items in the supermarkets); BioVista trade panel data and Klaus Braun trade panel data (organic shops)
Methods of data collection	AMI purchases data from GfK and also sets up the task force Arbeitskreis Bio-Markt
Sample size	GfK: 13,000 households
Estimated coverage	GfK: organic (66 % coverage) and conventional (76 % coverage)- after a rework of data according to the method "Response weighting and penetration correction" coverage is unknown and has to be newly determined; Nielsen scan track data: 100%; BioVista: 100% for all packed bar coded food in organic shops. Klaus Braun: 100 % for organic shops
Comments	Monthly cross-checks for fresh products AMI also purchases monthly GfK raw data for selected organic products. This is part of an AMI-GfK contract, AMI buys data but also cross-checks them Several research projects have highlighted potential coverage gaps for the organic market. Regular feasibility checks for product allocation to "organic" based on product price
Coherence and comparability	
Coherence and comparability of the data collection method	Panel data and surveys
Disaggregation of data	GfK: National and regional
Comments	GfK: Large national sample size, regional disaggregation can lead to small samples and questionable representativeness of the results especially with regard to organic products. The same procedure with task force has been used since 2010
Accessibility	BioVista: voluntary
Voluntary or compulsory to provide data	
Availability of data	Varies between different panels. Some data are purchased (AMI purchases data from GfK) while other data are given freely; Detailed sources are all commercial
Format of publication	Data and reports are published.
Comments	All of the panel institutions until now have given their data for free to the other members of the task force, which could become a problem for panel institutions that have to earn money out of selling their data
Timeliness	
Frequency of data collection	Varies between different data houses, but mostly monthly;
Frequency of publication	Monthly to quarterly reports on the market development of fresh products, overall market estimate annually.

Comments	More regular data sets can be purchased from some data houses

Catering volumes and values

The German catering market was only once (2009) estimated in a study by a´verdis, but is not estimated on a regular basis.

International trade data

International trade data has not been collected on a regular basis until 2011. AMI together with FiBL (Research Institute of Organic Agriculture) and Agromilagro Research have estimated imports of the most important organic products for the business year 2009/10 in a study financed by the Federal Organic Farming Scheme (full report in German see http://orgprints.org/19899/). In the beginning of 2014 AMI has published data for the business years 2010/11 until 2012/13 with similar methods and the financial support of the BMEL and will do so in the following years.

Table B 10: German international trade data quality assessment

Quality assessment	Description
Accuracy	
Data source	Estimated imports of the most important organic products (by AMI, FiBL and Agromilagro Research).
Methods of data collection	Data puzzle of GfK household panel data for fruit, vegetables and eggs (have to be labelled in the shops by country of origin), foreign trade statistics for single importers, surveys of importers and production data development
Sample size	Approx. 60 importers and experts
Estimated coverage	Depending on product – from 50 to 100 %
Comments	Companies are often not willing to share import data.
Coherence and comparability	
Coherence and comparability of the data collection method	2012/13 survey is comparable with the former one (2009/2010) and the following ones
Disaggregation of data	
Accessibility	
Voluntary or compulsory to provide data	Voluntary.
Availability of data	2009/10 results freely available – 3 new reports as collection of charts available for 237 EUR each here: http://www.ami-informiert.de/ami-shop/ami-shop-startseite/produkte/markt-charts/markt-charts-chartsammlungen.html
Format of publication	Report. 2011 edition available at http://orgprints.org/19899
Comments	From 2012/13 onwards results will be available at a cost and freely available for data providers
Timeliness	
Frequency of data collection	From 2012/13 will be collected annually.
Frequency of publication	Annually at BioFach.

Comments	In the coming years from 2012/13 on, the survey will be repeated with similar methods

Prices

Price at farm level

Data on organic prices at farm level on a weekly or monthly basis (depending on product) have been collected since the middle of the 1990s by the ZMP and since 2009 by AMI. AMI produces the "AMI Marktwoche Ökolandbau" (AMI Weekly Organic Market Report) on a weekly basis. This report contains weekly producer prices (independent organic shops and independent wholesalers) for fruit, vegetables, and potatoes and also purchase prices for imported fruit and vegetables. Producer prices for cereals and protein crops (from independent mills), animals for slaughter (from slaughterhouses), and milk (farm-gate price) are collected and published on a monthly basis combined with monthly market analyses about these products and fruit, vegetables and potatoes. Egg prices (ex-packer) and market analyses are published quarterly. Additionally there are analyses about the market development of fresh products according to GfK data that AMI subscribes to on a quarterly basis.

Table B 11: German farm-level price data quality assessment

Quality assessment	Description
Accuracy	
Data source	AMI: excel questionnaires or individual price lists sent by the traders or by telephone interview.
Methods of data collection	Prices are collected via Excel forms
Sample size	
Estimated coverage	70% of the organic pigs, 25% of the organic cattle, 40-50% for cereals and 90% for milk. 80% of the potatoes market, 10% of the egg market
Comments	Prices for animals for slaughter are weighted by the real number of sold animals. Other prices are weighted by the size of the enterprises.
Coherence and comparability	
Coherence and comparability of the data collection method	
Disaggregation of data	Disaggregated by product type
Comments	Nearly 60% of the organic egg market in Germany is concentrated in two big companies that are not willing to take part in the panel. That is why the organic egg panel only covers about 10% of the market and shows slightly higher prices than those big companies would pay.
Accessibility	
Voluntary or compulsory to provide data	Voluntary
Availability of data	
Format of publication	AMI Markt Woche Öko-Landbau (AMI weekly market report) http://www.ami-informiert.de/ami-shop/ami-shop-startseite/produkt-ansicht/amiartikelnr/65200.html
Timeliness	
Frequency of data collection	Weekly or monthly

Quality assessment	Description
Frequency of publication	Weekly, monthly or quarterly (depending on product)
Comments	

Prices are collected via Excel forms, individual price lists sent by the traders or by telephone interview. They are all collected in a database and weighted with the size of their enterprise (either by hectares or by sales volumes). Prices for livestock for slaughter are weighted by the number of animals sold. Panellists also get a monthly internal evaluation of the number of slaughtered animals per month. The AMI animal for slaughter panel represents about 70% of the organic pigs in Germany and 25% of the organic cattle. For cereals and milk the panel coverage is reasonable: about 40-50% for cereals and 90% for milk. The surveyed potato packers and producers represent 80% of the potatoes market. The coverage for fruit and vegetables is much lower as the market actors are mostly much smaller, but the AMI producer price panel is a good instrument to show market development. For eggs, AMI and MEG (Market Info for Eggs and Poultry) built up a producer price panel in 2010. Nearly 60% of the organic egg market in Germany is concentrated in two big companies that mainly deliver to the discounters but are not willing to take part in such a panel. That is why the organic egg panel only covers about 10% of the market and shows slightly higher prices than those big companies would pay.

Retail price

Data on organic retail prices on a monthly basis are collected and cross-checked by AMI using GfK household panel data. See section above on organic trade/retail data.

Data gaps and issues

The main data gaps and issues that exist at present in Germany appear to be:

1. There is no official data on land use and livestock numbers in Eurostat although such data does exist and is even financed by the Federal Office for Agriculture and Food (BLE).The annual AMI (Agricultural Market Information) structural data survey about land use and livestock numbers among the control bodies is not yet recognised as official data and not delivered to the EU and Eurostat. Until now, data delivery has been voluntary and not all the control bodies have taken part. If possible, this data delivery should be made compulsory.
2. Although AMI has access to very detailed market data on fresh products via the GfK household panel this does not cover the whole market. Firstly, AMI does not have access to all product groups but only to fresh products (meat, meat products, poultry, eggs, fruit, vegetables, potatoes, bread, milk, milk products, cheese, and vegetable oils) that cover approx. 61-63% of the market. Secondly, like all household panels, the GfK does not cover all purchases for several reasons: small purchases, such as in bakeries, are not scanned by the households; not all the household members scan regularly; purchases in small and specialised shops (also organic shops) are under-represented in the panel; and catering sales are not collected there at all. Additionally the GfK changed their method of weighting and correcting their data at the beginning of 2013. Prior to that change a study by Bien and Michels 2007 had estimated that the so-called coverage gap for organic products was 66% (76% for conventional products). With that extrapolation factor it was possible to calculate the volume of purchases in all sales channels. With the new method of weighting (so called “coverage weighting and penetrations correction”) the coverage, which is likely to have improved, has to be defined again to allow calculation of the volume and value of the real market.

3. For estimating the whole organic market, AMI and other organisations have set up an organic market task force Arbeitskreis Biomarkt. This task force has been working since 2010 (for estimate of 2009 data) on a regular and voluntary basis. Panel institutions have previously provided their data for free but this will probably change and needs to be resolved. Sponsorship of the regular estimate and of a project determining the new extrapolation factor is needed.
4. There is limited data on sales through non-multiple sales channels such as box schemes, farm shops, farmers' markets, butchers, and bakeries. GfK data from these market channels is not always reliable and shows inexplicable variations. That is why it is suggested to set up an annual survey among farm shops, farmer´s markets, butchers, bakeries, and box schemes about their annual sales in the main product groups.
5. There is no data on catering sales.
6. There is no data on organic exports from Germany.

Italy (by Francesco Solfanelli, Daniela Vairo and Raffaele Zanoli[7])

Production data

Production area/livestock number data

Production data (number of operators, areas of crops, livestock numbers) are collected by the various Control Bodies (CBs) as part of their certification process. The information coming from the Control Bodies operating at regional level (18 regions and 2 autonomous provinces) are then collected at national level by the Ministry of Agricultural, Food and Forestry Policies (Ministero per le Politiche Agricole, Alimentari e Forestali, MIPAAF)[8]. MIPAAF is also the Italian competent authority concerning organic farming. MIPAAF has the overall responsibility for supervision of the Italian organic control system (producers, processors, importers, exporters), but it has delegated the supervision to the region and/or province authorities, which delegated inspection and certification to accredited private control bodies (for more details see: www.politicheagricole.it).

Table B 12: Italian production (crop area/livestock number) data quality assessment

Quality assessment	Description
Accuracy	
Data source	15 private control bodies collated and cross-checked by SINAB (set up by MIPAAF).
Methods of data collection	CB inspection data
Sample size	All certified producers
Estimated coverage	Full
Coherence and comparability	
Coherence and comparability of the data collection method	Same methods as in other countries and supplied to Eurostat
Disaggregation of data	
Accessibility	
Voluntary or compulsory to provide data	Compulsory as part of control procedure
Availability of data	Published
Format of publication	SINAB report
Timeliness	
Frequency of data collection	Annual
Frequency of publication	Annual

The Ministry has set up a national information system on organic agriculture called SINAB[9], which collects, processes and makes available all the above information through an annual report on organic statistics. Data are also cross-checked and delivered to Eurostat. SINAB (Sistema d'Informazione

[7] Università Politecnica delle Marche, Italy

[8] The information coming from the CBs are also integrated with those coming from the computerised information system (SIB) recently set up by the Ministry. With the ministerial decree no. 2049 MIPAF set up different computerised information systems at regional level for the management of procedures concerning notification of agricultural activities and annual plans of production.

[9] Further information on this can be found at www.sinab.it/share/img_lib_files/1966_bio-in-cifre-2011-pubblicazione.pdf

Nazionale sull'Agricoltura Biologica) is the national information system on organic farming implemented by IAMB (Istituto Agronomico Mediterraneo di Bari). CBs, as part of their certification process, collect and send to SINAB, data on crop areas and livestock numbers. The project started in 1999. SINAB's objectives are: constant updating of the institutional information system on organic farming; technical support of the MIPAAF concerning statistics on organic agriculture; and development of an institutional intranet network. The SINAB documentation centre aims at disseminating publications on organic farming: to such purpose it collects and catalogues all the technical and scientific literature on the issue published in Italy and EU. For more details see: www.sinab.it.

Production volumes, yields, and value data

At present, there are no data collected concerning volume and value of Italian organic production. With regard to five Italian products, SINAB is currently conducting specific crop yield estimates at the regional scale. These data, together with crop areas, can be used to estimate production volumes.

Domestic trade/retail data

Retail volumes and values

Retail value data are estimated by ISMEA (Istituto di Servizi per il Mercato Agricolo Alimentare) using ISMEA/GFK-Eurisko panel data. Currently no data are published in terms of an absolute value, but only as a differential from the previous year (market dynamics). Also, data published by ISMEA refer only to sales through non-specialized shops (supermarkets, hypermarkets, drugstores). ISMEA is a public institute connected to the MIPAAF and appointed to carry out studies, to conduct research and to provide information on the production and marketing of food and agricultural products. ISMEA's objectives are: to provide support for the policy-makers and administration with regard to the orientation and trends of the agricultural sector; to provide information and services to public and private companies involved in the processing and marketing of agrifood products; to carry out promotional and empowering services in order to facilitate the trade of agrifood products in national and international markets; to provide support services for designing development programmes. For more details see: www.ismea.it.

AssoBio (Associazione nazionale delle imprese di trasformazione e distribuzione di prodotti biologici e naturali) also provides an estimate of the market value of both non specialised and specialised markets, which are based respectively on scanner data and data from distribution companies. AssoBio is the Italian association of processors and traders for organic products. They conduct research and provide information to organic operators through qualified economic experts on the food trade and consultants with broad experience in all aspects of food production (from product development to naming, labels and food laws, certification, and sales networks). AssoBio also offers information about trends within the organic agricultural sector. For more details see: www.assobio.it

Table B 13: Italian retail data quality assessment.

Quality assessment	Description
Accuracy	
Data source	GFK-Eurisko for non-specialised shops (ISMEA), scanner data and company data (AssoBio).
Methods of data collection	Household panel data used for assessing market dynamics by ISMEA. AssoBio's data collected through scanner data and by qualified economics experts

Quality assessment	Description
Sample size	
Estimated coverage	Specialised and non-specialised shops (later only companies working with AssoBio)
Comments	The two different estimates are not brought together at present
Coherence and comparability	
Coherence and comparability of the data collection method	no reconciliation between different data sources
Disaggregation of data	ISMEA data are broken down by category, geographical area, consumer profile and behaviour AssoBio covers specialist and non-specialist stores
Comments	ISMEA checks anomalies on the basis of historical data, comparison with trend of conventional products and with market trends in general
Accessibility	
Voluntary or compulsory to provide data	Voluntary
Availability of data	The main data are publicly available
Format of publication	ISMEA data are published in paper and online report AssoBio data are published in organic magazines.
Timeliness	
Frequency of data collection	Monthly by ISMEA, Annually by AssoBio
Frequency of publication	Quarterly

International trade data

Import data for organic products are currently collected and published by SINAB on the basis of self-declaration issued by the importers. MIPAAF recently set up a Ministerial decree (Ministerial decree Nr. 18378 of 9 August 2012) which requires that importers of organic products from third countries (both countries in the equivalent and not equivalent regimes) must self-declare the exact volume of each product imported.

There are no data on exports from Italy. A rough estimate of the total export value is carried out by AssoBio, but does not differentiate between EU and extra EU export.

Prices

Price at farm level

Data on organic prices at farm level are collected annually by ISMEA's experts, who perform specific surveys at regional level.

The main Italian commodity exchanges (Milano and Bologna) also provide weekly price data for commodities (cereal and industrial crops) and for fruit and vegetable products. These prices are determined through the work of a specific commission (composed by stakeholders); however, they are not directly dependent from the number of transactions.

Table B 14: Italian farm-level price data quality assessment

Quality assessment	Description
Accuracy	
Data source	ISMEA
Methods of data collection	Expert surveys Weekly price data for commodities from two agricultural stock exchanges (Milano and Bologna)
Sample size	
Estimated coverage	
Coherence and comparability	
Coherence and comparability of the data collection method	
Disaggregation of data	Regional (ISMEA), and by commodity (Italian commodity exchanges)
Comments	Checked for anomalies on the basis of historical data, comparison with trend of conventional products and with market trends in general
Accessibility	
Voluntary or compulsory to provide data	Voluntary
Availability of data	Public
Format of publication	
Timeliness	
Frequency of data collection	Annually (ISMEA) and weekly (Italian commodity exchanges)
Frequency of publication	As above

Retail price

Data on organic retail prices are collected by ISMEA through GFK/EURISKO and directly from the retail distribution channel price lists.

Data gaps and issues

The analysis of the current Italian data collection system was conducted during two workshops (6th of May and 18th of June 2013) and involved national bodies[10] that currently collect and publish data. The main data gaps and issues that exist in the Italian organic data collection system are the following:

1. There is very limited, if any, information on both volume (in tonnes) and value (in million Euros) of organic primary production (for both crops and livestock). An estimate of production volume in tonnes is only available for specific crops.
2. There is limited data on retail sales values. ISMEA only provides an estimate based on household panel data for non-specialised shops (supermarkets, hypermarkets, drugstores). AssoBio provides an estimate of the market value of both non specialised and specialised markets.

[10] MIPAAF, SINAB, ISMEA.

However, the data cover only 80% of the entire market. There is also no harmonized collection system for consumption and retail data between ISMEA and AssoBio.

3. Before 2012, the availability of data on imports was very limited: import data for organic products were collected and published by SINAB on the basis of import authorisations issued by the Ministry and therefore only for the not-equivalent third countries. Since organic products from equivalent third countries can be imported without authorisation, information on volume by products imported is not directly registered in the system. Therefore, import volumes (in tonnes) only refer to data on imports from third countries that are not under the equivalency regime, which represent only a small proportion of the total imports. In order to overcome this issue, the Ministry of Agricultural, Food and Forestry Policies (MIPAAF) recently set up a Ministerial decree (Ministry decree Nr. 18378 of 9 August 2012) which requires import operators of organic products from third countries (both countries in the equivalent and not equivalent regimes) to self-declare the exact volume of each product imported. However, the transmitted data from the operators are not always fully reliable, leading to a need for consistency checks.
4. Apart from a total export value, there are no data on organic exports from Italy.

France (by Camille Moreau, Nathalie Rison, and Dorian Flechet[11])

Production data

Production area/livestock number data

The main data on production areas and livestock numbers come from the eight control bodies (CB) in France. Every 10 years, the Ministry of Agriculture runs a census covering all the farms in France (organic and conventional), and an update is carried out on a sample every year. Some data that relates to organic agriculture are crossed with the database of Agence Bio, the French Agency for Organic Farming. For example the average employment per year in organic farms was established for the year 2010.

Table B 15: French production (crop area and livestock number) data quality assessment

Quality assessment	Description
Accuracy	
Data source	Certification inspections. Nationwide census.
Methods of data collection	The main data comes from the 8 control bodies (CB) in France. It is then double checked by Agence Bio. Every 10 years the Ministry of agriculture runs a census covering all the farms in France (organic and conventional); an update is done on a sample every year.
Sample size	All certified producers.
Estimated coverage	100% of certified producers.
Coherence and comparability	
Coherence and comparability of the data collection method	CB data from inspections, similarly to the method used in most countries.
Disaggregation of data	Broken down into crop groups (e.g. cereals, fruits) and livestock types (e.g. dairy cows)
Accessibility	
Voluntary or compulsory to provide data	Compulsory (part of the control process)
Availability of data	Published within "Chiffres clés" publication by Agence Bio.
Format of publication	Free report and data online
Timeliness	
Frequency of data collection	Annual for crop areas and livestock numbers. Quarterly for number of farmers, number of processors and number of distributors.
Frequency of publication	Annual.

Agence Bio uses data coming from the CBs to produce the statistics on the number of operators in the organic sector at a given time of the year. The area and livestock data are also collected. As controls by the CBs are carried out at least once a year, the data collected from them is a collection of snapshots for a given year.

Furthermore, Agence Bio runs the notification website[12] and therefore collects all the data linked to the notifications (essentially qualitative data). Some fields in the notification are compulsory, others are not.

[11] Agence Bio, France

The database is used only for some data analysis since the quality of the data is variable. The main use is for control and the completion of Agence Bio's web-directory.

Production volumes, yields, and value data

Production volume data come from different sources depending on the sector considered. All the data collected relate to the activity carried out on French territory with French and foreign raw materials. For arable crops, the exports volumes are known.

FranceAgriMer (FAM) collects data on the volumes collected and processed in some organised chains. All the farmers or processors acting independently of an organised chain are not included in the statistics. For example livestock feed produced directly on the farm is not counted in the statistics collected by FAM (but can be deduced).

Data collected by FAM include:

- Arable crops: cereals, oilseed and protein crops. Volume harvested and processed. Imported volumes. Type of companies concerned: mills, livestock feed merchants, storage companies.
- Milk and dairy products. Volume produced and processed. Imported volumes. Companies concerned: milk collectors and milk processors.

Interbev (Interprofession betail et viande), the sector organisation for livestock and meat, does an exhaustive survey of the organic slaughterhouses in France, giving an insight into organised beef, pig and sheep organic meat production. The production volumes in metric tonnes and the numbers of animals are collected as well as the destination of sales by retail channel. As for other sectors, only the organised chains are included in this survey, therefore direct sales from producers are missing. However, these are relatively low volumes since the necessary sanitary procedures are hard to enforce at farm level.

Synalaf (Syndicat national des labels avicoles de France), the national organisation for aviculture, does a survey amongst its members, giving an insight into organised poultry meat and egg production. The number of eggs produced and the number of animals being bred are collected. As for the other surveys mentioned above, only the organised chains are included in this survey therefore missing the direct sales from producers.

Regarding plant production, there is a lack of volume data on fruits and vegetables, wine, aromatic and medicinal plants. In the animal production sector, there is a lack of volume data on honey and fish. Those gaps can mainly be explained by the lower extent of the organised chains of production, which give less relevant volume data when they exist. Direct sales can be predominant in some sectors (e.g. wine), making it difficult to establish national volume estimates.

[12] The notification is a mandatory declaration of activity defined by Article 28 of Regulation EC 834/2007. It is required of all organic operators, with the exception of certain exempt distributors. Since 2003, management is provided by Agence Bio on behalf of the Ministry of Agriculture. Notification precedes the signing of the contract of compliance with the organic production between the operator and the certifying body that he has chosen from accredited control bodies in France and is an essential requirement for the payment of certain subsidies granted by the State or the Regions. Notification also allows the operator, once the commitment is validated by the control body, to be on the directory of organic business operators and allows Agence Bio to collect valuable sector statistics.

Some work is in progress to estimate volumes according to yields, mainly in the wine sector where a table of yields by region is used. In the fruits and vegetables field, the yields are much more variable and volume estimates should be interpreted with caution.

Table B 16: French production (yield and volumes) data quality assessment

Quality assessment	Description
Accuracy	
Data source	FranceAgriMer, Interbev, Synalaf
Methods of data collection	FranceAgriMer (FAM): collects data on the volumes collected (arable crops and dairy products) and processed in some organized chains. Interbev: Exhaustive survey of the organic slaughterhouses in France giving an insight into organized bovine, porcine and ovine organic meat production. The volumes in metric tonnes and numbers of animals are collected as well as the destination of sales by retail channel. Synalaf: A survey amongst its members, giving an insight into the organized poultry meat and egg production sector. The number of eggs produced and the number of animals being bred are collected.
Sample size	Meat: Only the organised chains are included in the Interbev survey; therefore the direct sales from producers are missing. However, these are relatively low volume since the sanitary procedures are hard to enforce at farm level. Eggs and poultry: Only the organised chains are included in this survey therefore the direct sales from producers are missing.
Estimated coverage	Arable: 80% of the sector (mainly mills, livestock food makers, storage companies) Milk: 80% of sector (mainly collectors and milk processors) Meat: 88% of the sector (all the slaughterhouses) Eggs: 65% of sector Poultry meat: 80% of sector
Coherence and comparability	
Coherence and comparability of the data collection method	Arable crops: cereals, oilseed and protein crops. Volume collected and transformed. Imported volumes. Type of companies concerned: mills, livestock feed merchants, storage companies. Milk and dairy products: Volume collected and processed. Imported volumes. Companies concerned: milk collectors and milk processors. Meat: Exhaustive survey of the organic slaughterhouses in France. Eggs and poultry: Survey amongst members of Synalaf.
Disaggregation of data	Arable crops: product level (e.g. wheat, corn, triticale, peas) Milk: product category (e.g. milk, butter, yogurt) Meat: species level (e.g. lamb, dairy cow, beef) Eggs: product category (e.g. eggs, laying hens) Poultry: product category (e.g. chicken, duck)
Accessibility	
Voluntary or compulsory to provide data	Voluntary
Availability of data	Published
Format of publication	Within Agence Bio's "Chiffres Clés" (free report and data online).

Timeliness	
Frequency of data collection	Annually
Frequency of publication	Annually

Domestic trade/retail data

Retail volumes and values

With the help of a consulting firm (AND international), Agence Bio carries out an annual estimate of the total market value at the retail level. The estimate is done around May of the following year. The sources are variable:

- Symphony IRI panel data for general supermarket retail (quarterly, 100% of fixed weight products, except wine)
- Biolineaire survey for specialized retailers (annually, 100%)
- Internet and/or postal and/or telephone surveys by Agence Bio and AND for the other retail schemes

For the general supermarkets, the IRI panel data represents roughly 70% of the total sales of the sector. Products with variable weights are not included. Wines are also not included in the IRI data, but data are acquired separately.

Concerning the hard discount sector an estimate is done by AND international, based on interviews and price/reference census in shops. The specialized network retailers' detailed sales are estimated based on a survey carried out by Agence Bio and AND.

Direct sales and artisans sales are also estimated using data collected within a survey. Because it covers many different small entities extrapolation rules can be hard to define, some sectors being over represented because of their willingness to answer the survey (wine sector for example). Some calibrating surveys focusing on a certain population are carried out as necessary to increase the accuracy of the estimates.

The CNIEL (Centre National Interprofessionnel de l'Economie Laitière*)* works on volumes and values for milk and dairy products based on the IRI Symphony data. The products followed monthly are: liquid milk, butter, yogurts, fresh dairy, fresh cheese, cheese, and milky desserts. The data collected concerns only the general supermarket retail scheme, but in France, many other schemes exist for dairy products. Agence Bio estimates that the data on dairy products (excluding liquid milk) represent roughly 60% of the sales in France.

Interfel is the inter-branch association of the fresh fruit and vegetable industry, existing and working specifically on organic products. Interfel runs a panel with Kantar, based on the consumption of 14 fruits and vegetables: tomato, zucchini (courgette), melon, onion, salad, carrot, cucumber, cauliflower, leek, apple, pear, kiwi, peach and nectarine. The panel gives estimates on volumes consumed and the corresponding value by household. 12,000 households are part of the panel. The individuals scan their products at home and send the data to Kantar. The extrapolation is carried out based on various criteria (age, gender, city, employment, etc.). However, some important fruits and vegetables are not included, for example bananas or potatoes, which account for a relatively important consumption of fruits and vegetables.

Table B 17: French retail sales (value) data quality assessment

Quality assessment	Description
Accuracy	
Data source	*General supermarkets:* Symphony IRI (hard discount excluded) *Specialised supermarkets*: Biolineaire panel and Agence Bio survey *Direct sales:* Agence bio (farmers) and AND international (processors) *Artisan retailers*: AND International *Milk and dairy:* Symphoni IRI (for the CNIEL) *Fruits and vegetables*: Kantar Worldpanel (for Interfel) *Eggs*: Kantar Worldpanel
Methods of data collection	*Milk and dairy products:* only fixed weight, hard discount retail not included. *Fruit and vegetables*: Estimate of the consumption in kg for 12,000 households (around 6,000 consuming organic products) *Eggs*: Household panel done by Kantar on all type of eggs consumed
Sample size	*General supermarkets*: Only fixed weight products (not self-serve products with variable weights). Hard discount not included. *Direct sales:* 1,000 farmers, 400 processors *Fruits and vegetables*: 20,000 households
Estimated coverage	*General supermarkets*: 70% *Specialised supermarkets*: 100% *Milk and dairy products*: 60% (supermarkets only) *Fruit and vegetables*: some important fruits and vegetables are not included, for example bananas or potatoes, which accounts for a relatively important consumption of fruits and vegetables *Eggs*: 100%
Comments	*Direct sales*: Because the survey covers many different small entities extrapolation rules can be hard to define, some sectors being over represented because of their willingness to answer the survey (wine sector for example)
Coherence and comparability	
Coherence and comparability of the data collection method	
Disaggregation of data	By product type (general supermarkets, milk and dairy, fruits and vegetables, eggs) By product category (specialised supermarkets, direct sales, artisan retailers)
Accessibility	
Voluntary or compulsory to provide data	Voluntary
Availability of data	Published within Agence Bio's "Chiffres Clés" report.
Format of publication	Report within Agence Bio's "Chiffres Clés" (free report and data online).
Timeliness	
Frequency of data collection	Annually (specialised supermarkets, directs sales, artisan retailers) Quarterly (General supermarkets) Monthly (milk and dairy, fruits and vegetables, eggs)
Frequency of publication	Annually
Comments	Published in May of following year

Catering volumes and values

An estimate is made by Agence Bio with the support of CSA (a market research firm) based on 400 phone interviews with those responsible for catering (buyers of food products). It is important to note that the survey covers only collective catering (this covers any meal served away from the house which is largely paid for by the service provider; public and private. It would include schools, universities, hospitals, retirement homes, prisons, work canteens etc. but not commercial catering).

Table B 18: French catering data quality assessment

Quality assessment	Description
Accuracy	
Data source	A survey carried out by Agence Bio with the support of a market research company (CSA)
Methods of data collection	Phone interviews
Sample size	400 phone interviews with those responsible for catering (buyers of food products).
Estimated coverage	Only collective catering (public and private). Not commercial catering.
Coherence and comparability	
Coherence and comparability of the data collection method	400 phone interviews with those responsible for catering (buyers of food products).
Disaggregation of data	Proportion of restaurants offering organic products, proportion of organic products offered, value of organic products (at purchase level). Volumes are not always estimated.
Comments	Additionally collect data on changes of habits induced by the use of organic products.
Accessibility	
Voluntary or compulsory to provide data	Voluntary
Availability of data	Published within Agence Bio's "Chiffres Clés" (free report and data online).
Format of publication	Report.
Timeliness	
Frequency of data collection	Annually.
Frequency of publication	Annually.

The estimates are about the:

- % of canteens providing organic products by type of canteens
- % of products introduced in catering by type of products
- Costs of organic products (aggregated at the category level)
- Changes of habits induced by the use of organic products

International trade data

Import volumes and values

Import volumes (including within-EU imports) are known at large scale for products like arable crops, fruits and vegetables, milk and dairy, eggs, meat, fish products and beverages. Exhaustive import value data are not available in France at the moment.

However Agence Bio, with the support of AND international, estimates the value of imports (in the sense of coming from outside France i.e. including products from other EU countries). This estimate is made using a survey of processor companies which detail the percentage of their purchases from outside France. Therefore, the estimate is done at the wholesale level, not at the consumer level. After some consistency analysis on import volumes of some products, a percentage of introduced products (by category) in France is given. A collaboration with the French customs is going to be initiated for a better understanding of the import of some non EU products.

Table B 19: French import data quality assessment

Quality assessment	Description
Accuracy	
Data source	France AgriMer (FAM) for arable crops (grains only) and liquid milk. Supplemented with estimates from Agence Bio (supported by AND international) for import values and percentage of imported products.
Methods of data collection	Data collected by FAM. Estimates made with the help of processors who detail the proportion of their purchases outside of France.
Sample size	
Estimated coverage	FAM covers 70% of the liquid milk market.
Coherence and comparability	
Coherence and comparability of the data collection method	Data collected by FAM. Estimates made with the help of processors who detail the proportion of their purchases outside of France (therefore are at wholesale, not consumer, level).
Disaggregation of data	FAM data can be disaggregated to product type (e.g. wheat, corn, triticale). After some consistency analysis on import volume estimates of some products a percentage of introduced products (by category) in France is given
Accessibility	
Voluntary or compulsory to provide data	Voluntary
Availability of data	Published within Agence Bio's "Chiffres Clés" report.
Format of publication	Published within Agence Bio's "Chiffres Clés" (free report and data online).
Timeliness	
Frequency of data collection	FAM collects data monthly.
Frequency of publication	Annually.

Export volumes and values

Export volumes (understood as going out of France, and therefore including transactions within the EU) are collected by FAM only for the arable crops. Exhaustive export value data are not available in France at the moment.

Agence Bio's survey of processors includes some questions on export of French products out of the country, which allows some rough estimates. In 2013, the survey on 2012 data of processors has been reinforced with more questions on the export activity of companies (including asking about countries of destination for the products).

Table B 20: French export data quality assessment

Quality assessment	Description
Accuracy	
Data source	FAM collects export volumes for arable crops only. Agence Bio's survey of processors includes some questions on export which allow approximate estimates.
Methods of data collection	FAM data for arable crops. Agence Bio's survey of processors includes some questions on export.
Sample size	
Estimated coverage	
Comments	Experts assessment
Coherence and comparability	
Coherence and comparability of the data collection method	FAM collects export volumes for arable crops only. Agence Bio's survey of processors includes some questions on export which allow approximate estimates.
Disaggregation of data	FAM data can be disaggregated by product type (e.g. wheat, corn, triticale)
Accessibility	
Voluntary or compulsory to provide data	Voluntary
Availability of data	Published within Agence Bio's "Chiffres Clés" report.
Format of publication	Published within Agence Bio's "Chiffres Clés" (free report and data online).
Timeliness	
Frequency of data collection	FAM collects data monthly.
Frequency of publication	Annually.

Prices

Price at farm level

Few data are available on prices at farm level. However, some prices are known from informal discussions with processors.

Table B 21: French farm-level price data quality assessment

Quality assessment	Description
Accuracy	
Data source	France AgriMer collects data on some products (producer survey, milk collecting organisation, wholesale markets Rungis). There are also detailed data on cereal and oilseed prices collected by La dépêche. http://www.depeche.fr/ in the password protected area.
Methods of data collection	Data collected by FAM for liquid milk and for fruits, vegetables and cereals. Some prices are known from informal discussions with processors.
Sample size	
Estimated coverage	
Coherence and comparability	
Coherence and comparability of the data collection method	Data collected by FAM for liquid milk and for fruit and vegetables. Some prices are known from informal discussions with processors.
Disaggregation of data	By product for milk. By species for fruit and vegetables (e.g. lettuce "Batavia blonde", lettuce "Batavia red").
Accessibility	
Voluntary or compulsory to provide data	Voluntary
Availability of data	Online
Format of publication	Online
Timeliness	
Frequency of data collection	FAM collect fruit and vegetable data daily FAM collect liquid milk data monthly
Frequency of publication	Monthly

Retail price

In France, the diversity of distribution networks makes it difficult to estimate the prices at retail level. Regarding the specialised retailers, no price data are available. The same is true for direct sales, so the data that are collected on prices refer only to prices through supermarkets.

Table B 22: French retail price data quality assessment

Quality assessment	Description
Accuracy	
Data source	FranceAgriMer collect data on fruit and vegetables (100 products), milk, eggs and poultry sales. Symphony IRI (for CNIEL) collect data on milk and dairy products + retail prices in general supermarkets
Methods of data collection	
Sample size	Fruit and vegetables: Eggs: data from 150 supermarkets and separate data from household panels (Kantar)

	Poultry: data from 150 supermarkets
Estimated coverage	
Coherence and comparability	
Coherence and comparability of the data collection method	
Disaggregation of data	By product (liquid milk, butter, a dozen eggs, 100 eggs)
Accessibility	
Voluntary or compulsory to provide data	Voluntary
Availability of data	Online
Format of publication	Online
Timeliness	
Frequency of data collection	Fruit and vegetables: daily Eggs (supermarket): daily Poultry: daily Milk and milk products: monthly Eggs (household panels): monthly
Frequency of publication	

Data gaps and issues

The main data gaps and issues in France are:

1. Production volumes of fruits and vegetables, etc.
2. Volume and prices of products at the retail level.
3. Precision on the import / export volumes and values.
4. Prices at farm level, which are difficult to estimate for some products due to the very diverse retailing channels.

Czech Republic (by Michal Lošák and Jakub Husák [13])

The information for this report was collected through interviews with the main actors involved in organic market data collection in the Czech Republic, namely: Ministry of Agriculture (MA) – Head of organic farming unit Mr. Jan Gallas; Institute of Agricultural Economics and Information (IAEI) – Ms Andrea Hrabalová, responsible for organic data statistics, and Mr. Josef Hanibal, responsible for FADN surveys; and Green Marketing (GM) - Ms. Zuzana Čítková market research manager of the agency collecting data about prices of organic foodstuffs in the Czech Republic retail sector. The interviews lasted 45-60 minutes. Additional information was found via the internet and through studying the reports published by the mentioned bodies.

IAEI (Agri-environmnetal policy department) produces an organic farming report annually in two volumes. The first volume of the report, started in 2009, is focused on market data ("Zpráva o trhu s biopotravinami v ČR") and the second part of the report, started in 2007, is focused on production data at farm level including prices at farm level ("Základní statistické údaje"). The first part is usually published during April and the second part during August. IAEI works on the so-called "thematic tasks" funded by the Ministry of Agriculture. One such task is called a Statistical survey of organic farming ("Statistická šetření ekologického zemědělství") and it includes the mentioned reports. Since 2012 a new task focused on an extension of organic farms sampled in FADN ("Rozšíření základního souboru FADN o podniky hospodařící v EZ") has been funded.

The report on the organic food market in the Czech Republic ("Zpráva o trhu s biopotravinami v ČR") covers

(1) Description of method and data analysis.

(2) Summary.

(3) The size of the organic food market in the Czech Republic (turnover, export in Czech Koruna (CZK), organic food consumption in CZK).

(4) The share of domestic and imported production on the Czech market (estimates).

(5) The demand for organic food (as a % of total organic food turnover by food type).

(6) Organic food distribution channels (supermarkets, shops, direct sales, restaurants – share of this sales route in the total turnover).

(7) International comparison of organic food consumption.

(8) Number and structure of organic food processors, numbers of food processors disaggregated according to the type (NACE[14] classification, e.g. processing meat without poultry meat).

(9) The size of the organic food processing sector: disaggregated according to the processing company turnover, top 15 largest organic food processors in the Czech Republic according to their turnover, the structure of processors according to the share of organic food products on their total turnover, the share of main categories of food in the turnover, the numbers selling a proportion of their production on the Czech market and exporting (including country of export) – categories according to the percentage selling their products in the Czech Republic or abroad

[13] Ceska zemedelska univerzita v Praze, Czech Republic

[14] For information on the NACE classification, see: http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-RA-07-015/EN/KS-RA-07-015-EN.PDF

(e.g. 106 companies sell 100% on Czech market, 4 sell only 10% of their production on the Czech market).

(10) Distribution channels of organic food (number of organic food distributors, also how producers distribute their products, list of the retail chains offering organic products (including number of organic products, not prices), the structure of the distributors according to their turnover, the share of food categories within distribution, where do the distributors market the products (the Czech Republic, export – countries), the ways of distributing foods (via supermarkets etc.).

Basic statistical data ("Základní statistické údaje"), which focuses on production data, covers in its first section (focussed on the required data for Eurostat):

(1) Description of methods of data collection.

(2) Data on the development of organic farming in the Czech Republic (including disaggregated information by land uses – orchard, arable, etc.), size of the farm in hectares (size categories and types of land e.g. arable, grass, in the types of farm sizes), regional (NUTS 3) disaggregation of farms.

(3) Data on crop production (disaggregated in the same structure as for the Eurostat tables: e.g. types of grain for the production of grains: wheat, barley etc.), showing sizes of conversion areas and certified areas, production in tonnes and yields (tonne per hectare) – all disaggregated by types of plant (for instance poppy seeds in 2011: 7 farms, 9 ha in conversion, 0.77 ha in organic production, 0.46 tonnes of organic production (not from conversion), 0.6 t/ha yield), it also includes vegetables and fruits (also disaggregated – e.g. apples, nuts etc.), comparison of organic area and production sector with the overall agricultural area and production (types of grains, potatoes, legumes), regional (NUTS) disaggregation.

(4) Data on livestock production on farms (disaggregated by types as required by Eurostat: cattle, sheep etc. – number of heads of livestock, additionally, the number of farms with such livestock), regional (NUTS) disaggregation, production on farms – meat (in thousands of kilos): beef (number of farms and production), pork etc., number of animals (sold or for breeding/raising), dairy products (milk from cows, sheep, goats etc.).

(5) Number of actors in the organic sector (farms, processors, exporters, importers, bee-keepers), numbers of producers of organic food (disaggregated according to the type of production).

(6) Other data on organic farms (coexistence of organic and conventional farming on farms – disaggregated according to region and type of production: crops, livestock, both, share of profitable farms, number of workers on farms).

The second section covers the data about marketing channels, direct sales and whether the product is sold as organic or conventional (this is focussed on data required by the Ministry of Agriculture).

(1) The ways in which the product is utilized (disaggregated according to plant product – e.g. wheat: number of farms, overall production in tonnes, overall production without conversion (in tonnes), percentage of wheat production sold and used for other purposes, percentage of wheat production sold on domestic market and exported, percentage sold as organic and conventional. Also the estimates for the year when the data are gathered are carried out (the data are gathered in the spring, that is why an estimate is required).

(2) The ways of utilising animal production (disaggregated in the same way as for plant production).

(3) Marketing channels for the production together with farm prices (disaggregated into types of products).

(4) Direct sales (including turnover of the farms from direct sales).

(5) Food processing on farms.

(6) Information about financial support for organic farming.

Production data

Production area/ livestock number data

Crop area and livestock number data (areas of plant production in terms of types of cereal, types of vegetable and types of fruits such as strawberries, and numbers of livestock) are the most collected types of data related to organic farming. These data are collected through a survey of all the actors (i.e. not from a sample) in organic sector production (based on control bodies KEZ: about 1700 clients; ABCERT AG: 570 clients; Biokont CZ: 1650 clients).

Table B 23: Czech Republic production (livestock numbers and crop areas) data quality assessment.

Quality assessment	Description
Accuracy	
Data source	CB data supplied to the Institute of Agricultural Economics and Information (IAEI)
Methods of data collection	Survey and organic control process – filling in of the questionnaire during annual inspection visit on farm by inspectors
Sample size	Approximately 3900 in total (KEZ: 1,700 + ABCERT AG: 570 + Biokont CZ: 1,650)
Estimated coverage	100%
Coherence and comparability	
Coherence and comparability of the data collection method	Survey collecting crop area, number of livestock and volume of production (areas of plant production in terms of types of grain, types of vegetable and types of fruits). Structure as for Eurostat -the data can be compared on a year-by-year basis
Disaggregation of data	Areas disaggregated (arable land without land with vegetable and herbs and only land with vegetable and herbs, permanent grass land, orchards, vineyards, hop-yards, lakes. Structure as for Eurostat – individual data for farm, possible to disaggregate into NUTS.
Accessibility	
Voluntary or compulsory to provide data	Compulsory (part of control process) Compulsory for CB to delivered such data to IAEI
Availability of data	Available for free after approval by MA (database is managed by IAEI and data are distributed based on individual application). Individual data are not available; IAEI provides tables of results based on application approved by MA to interested clients).
Format of publication	Czech report on organic farming statistics (Základní statistické údaje) Main results are published in Yearbook for Organic Farming.
Timeliness	
Frequency of data collection	Annual
Frequency of publication	Annual

As a part of the control process, the control bodies know the composition of crops (area data) and animal production (livestock numbers) on each organic farm. Control bodies supply the data to the Institute of Agricultural Economics and Information (IAEI), which publishes a Czech document on organic farming statistics. These data are also passed to Eurostat (the questionnaire survey implemented by the control bodies reflects the Eurostat requirements).

Production volumes, yields, and value data

Organic production volume data, yields (calculated as volume divided by area fully organic) and farm price data are collected annually by the control bodies (KEZ, ABCERT AG and Biokont CZ, and from 2013 a new emerging control body Bureau Veritas) as part of the control process described above. The results of the questionnaire survey reflecting the requirements of Eurostat are supplied to IAEI via the internet. The data are collected during the whole of the year for which they are to be published (e.g. data for year 2013 required to be sent to Eurostat by July 2014 were collected during the whole of the year 2013 on farm by inspectors). The data are collected based on a questionnaire survey produced by IAEI, which is updated every year according to requests from Eurostat or the MOA The survey is intended for 100% of the organic farmers in the Czech Republic. Because the data collection has to be carried out for Eurostat by July 1, the data are partly estimated as some farms are visited in the first half of year before harvest (e.g. estimate of the volume of grain to be harvested or estimate of the volume of milk to be milked in the calendar year). Since the estimate has been carried out for many years this long-term experience provides the control and guarantee of the accuracy of the estimated data (long-time comparison).

The Ministry of Agriculture (MA) also asked IAEI for a national survey to obtain the real amount of production and the share of production from organic farms sold as organic. Therefore the national producers' survey was developed by IAEI. The data for the national survey are also collected by the control bodies (KEZ, ABCERT AG and Biokont CZ) and are supplied to IAEI which publishes the statistics. CB inspectors complete both questionnaires at the same time during one obligatory inspection of farm (e.g. data for the year 2012 (actual figures) are collected together with data for year 2013 (which may require forecasting) for Eurostat) to check estimates sent to Eurostat and to calculate the share of primary production that is exported and that is sold as organic and to obtain data on farm prices realized via different distribution channels.

Thus the data collection includes:

1. real production volume (only main crop and livestock categories)
2. Differences between the estimated data sent to Eurostat and the actual data now obtained on farm
3. How the produce from the organic farm was used: share sold versus that used on farm; sold as organic versus sold as conventional; proportion used in the Czech Republic versus proportion exported
4. Farm price for main crops and livestock products via different distribution channels.

In addition MA delegated to IAEI the task of annual publication of the official basic statistical data (e.g. total area in basic categories and number of all actors according to registration in the organic sector by December 31 each year.) Until 2012 these data were harmonized by IAEI from databases of CBs in the Czech Republic. Since 2013, the REP (Register of organic actors) has been accepted (after one year of testing) as the official data source. The register covers all actors operating in the organic sector and

these data are publicly available, managed by MA on its web site:
http://eagri.cz/public/app/eagriapp/EKO/Prehled/

REP contains lists of all actors by type of registration – farmers, processors, importers, etc. where their addresses are available, acreage of area (in conversion, fully converted and total in organic farming and in addition also area of conventional if applicable, in land-use categories based on LPIS structure, information about livestock, view of certificates with particular crops/livestock products certified used CPA codes.) REP was developed to organise all administrative issues between CBs and MA, so has much wider usage in its non-public version.

The data processed by IAEI prior to 2012 for MA reflecting the situation at the end of the year, had to be different from the data used for Eurostat (collected during whole year) and were not as detailed as for Eurostat (data till 31.12. can provide only total acreage in few basic land use categories – arable land, grassland etc. but data for Eurostat asks for data on individual items of vegetables e.g. carrots etc.). After REP implementation the basic data for the organic sector in the Czech Republic started to be available at all times since REP is online and regularly automatically updated.

Organic production data (volume and value) are also collected annually by FADN (Farm Accountancy Data Network) through a survey of selected organic producers as a supplementary part of the general FADN survey. FADN organisationally belongs to the Institute of Agricultural Economics and Information (IAEI). The implementation of the FADN system started in the Czech Republic in 1995, but the specific part focusing on organic farmers was launched in 2011. The organic part of FADN is a sample survey of 258 organic farms (193 family farms and 65 corporate farms) additionally implemented within the FADN survey (the original FADN sample involves 1420 farms, including some organic farms but additional sampling is used to increase the size of the organic sample). This organic sample represents different types of production, farm size and legal status (family farm, corporate farm business etc.). FADN investigates commodities, numbers, turnover, and sales (prices for the commodity). The data for FADN are collected annually on a particular day (not for the whole year) by long-term partners in FADN activities (accountancy companies, farming advisors, association of family farmers, Agrarian chamber) based on public procurement act selection criteria. The results of FADN CZ should provide a detailed view on the economic results and the position of agricultural holdings focussing on agricultural production to be marketed. The concept of FADN CZ is based partly on the methodology of the EU but at the same time it takes into account specific local conditions and differences in accountancy legislation and bookkeeping procedures as well as the different requirements of agrarian policy issues.

Data from FADN are supplied to MA; these data are not yet integrated with the results of the other surveys implemented by the same organization (IAEI) based on data collected by IAEI for Eurostat (survey done by control bodies). The first integration attempt will be the report as the result of the OrganicDataNetwork project published in the spring of 2014. Currently there is still some modification and coordination with FADN to be done. There is some data inconsistency between the FADN survey and the statistical survey of IAEI and the Ministry of Agriculture is not willing to publish data with inconsistencies.

Co-operation exists at the methodology level: data from the 100% survey helps to provide the required classification according to economic level and type of farm used in FADN. This helps to identify a required type of organic farms to be added to the FADN sample to be representative of organic agriculture in the Czech Republic. Future cooperation with the FADN team will include comparison of farm price data collected from both surveys (increasing the number of responses). Due to different sampling methods for the two surveys, it is necessary that all results are reviewed internally by IAEI before being published.

Table B 24: Czech Republic production (volume and value) data quality assessment.

Quality assessment	Description
Accuracy	
Data source	CB data supplied to IAEI based on Eurostat questionnaire and based on additional national questionnaire and FADN data.
Methods of data collection	Data for Eurostat are, due to the deadline, partly estimated. There is also an additional national producers' survey for IAEI to collect actual data from the previous year. Czech FADN also collects some additional data.
Sample size	CB data and IAEI survey cover 100% of producers. FADN covers 258 organic farms (193 family farms and 65 corporate farms).
Estimated coverage	CB data and IAEI survey cover 100% of producers. FADN is a smaller sample.
Coherence and comparability	
Coherence and comparability of the data collection method	Surveys – but the CB data are partly estimated whereas the IAEI survey is entirely backwards looking and so records actual figures.
Disaggregation of data	The data from the survey by IAEI reflecting the situation at the end of the year (actual data) are not as detailed as the CB data for Eurostat (partly estimated) (e.g. IAEI survey asks the volume of vegetables but Eurostat asks for items of vegetables e.g. carrots etc.)
Accessibility	
Voluntary or compulsory to provide data	Compulsory to CBs Data for Eurostat questionnaire are compulsory for CBs, additional national data are voluntary and the CBs are paid for providing it.
Availability of data	In a report (see below)
Format of publication	IAEI produces an organic farming report annually in two volumes. The first part of the report is focused on market data ("Zpráva o trhu s biopotravinami v ČR") and the second part of the report is focused on production data at farm level – including prices at farm level ("Základní statistické údaje"). The first part is usually published during April and the second part during August. Data for farms are published in the 2nd mentioned report.
Timeliness	
Frequency of data collection	Annual
Frequency of publication	Annual

Domestic trade/retail data

Retail volumes and values

Until 2009, Green Marketing (GM) investigated market data in the retail sector. However because the data were marketed to retail companies they could not be published publicly immediately (the companies paid for the data). In 2009, MA decided to have data from the state organization (GM is private). MA asked for data about organic retail sales, organic food consumption and organic food share of the market. These data were supposed to be provided by IAEI. IAEI has produced special questionnaires for the organic food processors, distributors (wholesalers) and retailers (650 businesses). However, it is not compulsory to answer the questionnaires. These data were collected annually in cooperation with Green Marketing Agency (2009-2013, since 2014 IAEI collect the data alone). The data

are collected using the questionnaire produced by IAEI. The questionnaire is produced in four formats – for producer, distributor, both producer and distributor, and retailer. The actual data for the previous year are collected ((e.g. during the year 2014 (from April to September) the data for the year 2013 are collected). The questionnaire is addressed to all registered organic market actors and the rate of return in 2012 was 69%. Almost all the main organic stakeholders respond. Because there is a growing number of farms-processors (160 out for 650) they provide the information as the questions form part of their inspection visit by the control bodies. The questionnaire is not compulsory for other processors. In the questionnaires, IAEI asks what the businesses produced and from where they purchased the inputs (in the Czech Republic or imported). Many producers are reluctant to provide information regarding what exactly they produced, from whom they purchased and the volume produced. They regard such information as commercially sensitive and view the provision of such information as potentially harmful to their business as they feel that it may give their competitors an advantage if they provide this information and the competitors do not. Those who answer the questionnaire mostly indicate the total sales value and the commodity in % of the total sale (e.g. total sale was 100,000 Czech Koruna (CZK), of which 40% was vegetables, 20% milk etc.). This means that IAEI knows the total turnover (CZK) and share (%) of main food categories based on CPA codes; also the share (%) of the main distribution channels in total turnover and share of export is known. GM is also doing research into the retail market (organic price monitoring). GM investigates what organic foods are in the retail shops. The data from retail shops collected by GM are up-to-date data but must be purchased. GM collects prices of all organic foodstuffs offered in nearly all retail chains every two months and provides an annual report. IAEI purchases such data and provides their own analyses.

The size of the organic food market is defined as the sum of turnovers of all registered food processors and distributors for the sale of organic foods to final consumers (in retail shops and through all types of direct marketing. These turnovers were increased by about 30% in general to represent the retail margin. Additionally the turnovers were increased for the sale of imported organic food which international supermarkets import into the Czech Republic directly from abroad.

Table B 25: Czech Republic retail (volumes and values) data quality assessment

Quality assessment	Description
Accuracy	
Data source	IAEI in collaboration with Green Marketing Agency (GM)
Methods of data collection	Questionnaires for organic food processors and traders – in four formats: processor, distributor, both registered as processor and distributor, and retail chains.
Sample size	650 contacts.
Estimated coverage	69% return rate but almost all of the main organic stakeholders respond.
Coherence and comparability	
Coherence and comparability of the data collection method	Questionnaires. Mostly get responses regarding total value of sales and commodities as a percentage of that and share (%) of main distribution channels together with information about export. Comparison of data from retail chains with data from survey of processors and distributors.
Disaggregation of data	Disaggregated. Processors, distributors (the report admits this disaggregation is questionable because the position might change during the period); the share of main types of food (e.g. meat, fruits and vegetables) of total organic food turnover, the share of main marketing

	channels (supermarkets, small shops, farmers' market etc.) including information about export of total organic food turnover, food processors according to the type (numbers) – e.g. production of juices, proportion of the organic food of total processing food company turnover. Distributors are disaggregated in a the similar way (share of main types of food distributed, main type of distribution channels used incl. export, share of organic in total turnover)
Accessibility	
Voluntary or compulsory to provide data	Voluntary.
Availability of data	Produced in a report (see below).
Format of publication	IAEI produces an organic farming report annually in two parts. The first part of the report is focused on market data ("Zpráva o trhu s biopotravinami v ČR").
Timeliness	
Frequency of data collection	Annual
Frequency of publication	Annual

Catering volumes and values

Catering volumes and values are not currently collected within the Czech Republic. These could be partly derived only from the surveys of processors and distributors – when processors declare that some products are sold to catering facilities (e.g. if a wine making farmer declares he sells 30% of his wine to a restaurant). The variety of restaurants and their offerings makes this a difficult area to investigate. No detailed surveys exist.

International trade data

Import volumes and values

Import volume data for non-EU countries which are not listed in the compliance list according to EC regulation 1235/2008 are precisely collected by the Ministry of Agriculture (and CBs) as part of the import/export authorisations (to export or import organic food from non-EU countries an export or import authorisation is needed; this includes the volume but not the price/value). The collected data are volume data according to the particular exporter/importer and particular commodities. The data are not published due to the privacy policy but there may be a possibility of publishing some general data on export and import to/from non-EU countries (needs to be approved by lawyers). Currently, there is discussion within the EU that the declaration will be issued by the European body (at present the trader has to ask MA, but it might be that in the future the trader will have to ask an EU body).

There are 2 regimes: import based on import declaration with approval from MA according to article 19, point 5 EU regulation 1235/2008 (valid only until 30.6.2014) and import based only on control provided by CB (based on annex V EU regulation 1235/2008) which will remain valid for the future. Data about import from third countries are collected by CBs (both regimes are based on MA approved declaration so based on only control protocol without declaration) and partly by MA (MA collects only data about imports realized on import declarations approved by MoA). Such data were not used before. First analysis was done by IAEI in a report related to market data in 2014.

Import and export data (not only from 3rd countries) are also investigated by the questionnaire survey by IAEI.

Export volumes and values

Export volume data (for non EU countries which are not listed in the compliance list according to EC Regulation (EC) 1235/2008) are precisely collected by the Ministry of Agriculture as part of the export authorisation (see above). These data are currently not published.

Export value data (for both EU and non-EU countries) are collected by IAEI as part of their annual surveys of operators. The questionnaire includes questions about exports and import in terms of the turnover of surveyed business (% of export) since they survey all organic sector businesses.

Table B 26: Czech Republic international trade data quality assessment

Quality assessment	Description
Accuracy	
Data source	Ministry of Agriculture as part of export/import authorisation (both imports and exports – related to 1235/2008 EU regulations – only bodies not listed in this regulation). IAEI annual survey for export and import value data (in %).
Methods of data collection	Customs declaration (need to be recorded to be processed). IAEI surveys
Sample size	
Estimated coverage	100% of those obliged to make such declarations according to 1235/2008.
Comments	The customs declarations (for all exports to/imports from outside the EU (not only those according to EU regulation 1235/2008 which are available at the Ministry of Agriculture and are provided by the ministry) are available from the Czech national customs office. The Ministry of Agriculture negotiates access to all of these declarations.
Coherence and comparability	
Coherence and comparability of the data collection method	As above.
Disaggregation of data	Volume data according to particular importer/exporter and particular commodities.
Accessibility	
Voluntary or compulsory to provide data	Compulsory to make customs declarations according to EU regulation 1235/2008.
Availability of data	These data are not currently published.
Format of publication	These data are not currently published.
Timeliness	
Frequency of data collection	Daily (when the export/import commences).
Frequency of publication	These data are not currently published.

Prices

Price at farm level

Data on organic food prices at farm level are collected annually (for the year preceding the year of data collection) by the control bodies (KEZ, ABCERT AG and Biokont CZ) and are provided to IAEI. Control bodies investigate the five most important organic products per farm in terms of volume sold, main distribution channels and prices achieved. The products are disaggregated according to: (1) distribution channels: sales to middlemen, food processors, export, direct sales etc.; (2) percentage of such sales in the given channel; (3) price of the type of product in this channel (range of price and average prices). At each farm IAEI asks for five most important products the farm markets and asks the farmer to answer questions on the areas listed above. Therefore in total IAEI presents in a summary table more than five products because they are selected at each farm by the respondents as their five most important products. The types of products covered in the summary table include: cereals/grains (disaggregated to wheat, barley, oats etc.), potatoes, vegetables (disaggregated), fruits (disaggregated), hay and haylage, milk and milk products, and livestock.

Data on organic prices at farm level are also collected annually by FADN in a survey of selected organic producers as a supplementary part of the general FADN survey (survey of the sample of 258 organic farms). In the FADN survey, they have information about prices of commodities (meat, milk, crops; but for example milk products are not distinguished into detailed items).

Table B 27: Czech Republic farm level price data quality assessment

Quality assessment	Description
Accuracy	
Data source	Annual collection by CBs provided to IAEI. Also collected by FADN.
Methods of data collection	Annual survey.
Sample size	CB data collected on all certified farms that already have certificates. FADN survey of selected organic producers
Estimated coverage	100% for CB data (IAEI). 258 farms (FADN).
Coherence and comparability	
Coherence and comparability of the data collection method	Control bodies investigate the most important disaggregated categories of organic products in terms of volume sold, main distribution channels and prices achieved (average price and range from lowest to highest price from farm information). IAEI check data with FADN (and with conventional prices provided by Czech Statistical Office) and provide summary tables aggregating particular crops into higher level categories and calculating average etc.
Disaggregation of data	Disaggregated: cereals/grain (disaggregated to wheat, barley, oats etc.), potatoes, vegetables (disaggregated), fruits (disaggregated), hay and haylage, milk and milk products (cow's milk, goat milk, and cheese), eggs, livestock (cattle, sheep, etc.)
Accessibility	
Voluntary or compulsory to provide data	Compulsory for the farmers during CB control and questionnaire for IAEI, answered only by those who sold their products with organic certificate (as organic food not sold to conventional marketing channels).

Availability of data	Available in IAEI report (see below).
Format of publication	IAEI produces an organic farming report annually in two parts. The second part of the report is focused on production data at farm level – including prices at farm level ("Základní statistické údaje"). The first part is usually published during April and the second part during August.
Timeliness	
Frequency of data collection	Annual.
Frequency of publication	Annual.

Retail price

Retail price data for organic products are collected by Green Marketing Agency (GM) every two months through its Price BIOmonitor tool. The basic part of the Price BIOmonitor is formed by a complete itemised list of organic products including EAN code, producers, distributors and labels. The data are collected by monitoring the prices of organic products in all retail chains in the Czech Republic. Only one shop from each of the chains is included in the monitoring and the selected other shops of each of the chains are used to validate the data. The data have been collected every two months since 2010 (in the current form). The data are collected on a commercial basis for commercial use (the data are not publicly available – customers pay for the data). GM does not investigate volumes but only what types of food products are in the shops and who is the supplier. There is sometimes the problem with the price monitoring that, since large supermarkets sometimes use promotions for organic products, the prices of retail organic food appear significantly lower. There is also a potential problem with continuity of data at each collection period due to the unavailability of all organic products at all retail chains every time. The data from GM are purchased by retail shops. The monitoring covers about 1,700 individual organic food items in the retail shops (a total of approximately 2,600 items is covered but it means that, for instance the milk from one producer sold in 4 supermarket chains is investigated 4 times).

Table B 28: Czech Republic retail price data quality assessment.

Quality assessment	Description
Accuracy	
Data source	Price monitoring of organic products by Green Marketing Agency
Methods of data collection	Price BIOmonitor tool: complete itemized list of organic products including EAN code, producers, distributors and labels.
Sample size	Approximately 1700 organic food items at the time of research.
Estimated coverage	Only one shop from each chain is included and selected additional shops are used to validate the data.
Comments	There is sometimes the problem with the price monitoring that, since large supermarkets sometimes use promotions for organic products, the prices of retail organic food appear significantly lower. There is also a potential problem with continuity of data at each collection period due to the unavailability of all organic products at all retail chains every time.
Coherence and comparability	
Coherence and comparability of the data collection method	As above.
Disaggregation of data	By organic product.

Accessibility	
Voluntary or compulsory to provide data	Data are collected on a commercial basis.
Availability of data	customers pay for the data
Format of publication	N/A (until 2009 the data were published within the report on the Czech market for organic food published by Green Marketing, it had a high price: about 100 EUR. Now the data are published as reports for the customers)
Timeliness	
Frequency of data collection	Every two months.
Frequency of publication	N/A (upon requests of the customers who pay for the data)

Data gaps and issues

The background for discussing data gaps and the other issues is embedded in the question of financing the data collection and data processing (e.g. only 25% of the time of the main person in data collection at IAEI is paid for by organic data collection). Also a clear vision and definition of the end-use of the data is missing. Various organizations want organic market data but they do not know how to work with the data. This is linked to the capacities to collect and process the data (and funding the data processing and collection). The main gaps in the data that were identified are:

(1) Production data are only an estimate for the particular year due to time of their collection (early in the year which is due to be reported). Data quality checks are, however, carried out on these data.

(2) Collecting some economic data at farm level highlights another issue: e.g. when the farm has 1000 hectares of land but produces only milk (and the forage to feed the cows), it looks like the area of the farm is not used since only the milk is accounted for and not the forage which is used on the farm and so does not leave the farm gate (milk is not related to the land which is grazed by cows). Many Czech cows are in stables, they do not graze meadows. In conventional farming, one farm produces hay for feeding and the milk. For the farm that produces the hay it is that hay which is the output of the farm (and it is obvious that so many hectares of the farm were used to produce this output). Another farm purchases this hay (it is its input) and produces milk as the output. In organic farming the situation differs. An organic farm has 1000ha but produces milk and beef and grows its own feed. The hay is consumed on the farm (it is not marketed) therefore it looks like there is no output from the land. The critics of organic farming say: 12% of land under organic farming produces only 1% of production in organic farming. This internal production cost in the farm should be taken into account. The data to do this are provided by FADN but not by other surveys. This is also one of the reasons why there are issues in matching data from the organic survey and data from FADN – they have different data collection methodologies.

(3) An important issue is the use of FADN (Farm Accountancy Data Network) to have information about farm organic market data. It can also help to improve data quality checks (comparison with other sources of data collection). Data from FADN survey are not yet integrated into the annual Czech organic market data report. Using FADN might help to solve the problems outlined in the previous paragraph (example of land and milk production).

(4) Data (both volume and value) from supermarkets are missing (not available publicly but only through GM, and as such they are available at a cost); supermarkets refuse to show their

contracts with the food producers to provide data on prices and values. GM has large databases of the data and prices from supermarkets but they are not publicly available and due to their size (large database) it is difficult to process the data.

(5) The existence of price data is considered an important issue for the extension services in organic farming (e.g. to advise the organic farmers what breed of cow to buy, it is necessary to calculate its consumption and to know the price of the fodder).

(6) Data about the development of commodity prices at farm level (time series) and comparison of organic farming and conventional farming data (comparable data are missing due to the different methodologies used in the data collection) are lacking. The data are available to some extent (volume and value data) but there is no time series of the data (due to the fact the organic data have only been collected recently). What is also missing is a comparison of data (volume, value) from the organic sector and from the conventional sectors to get a better analysis (the OrganicDataNetwork project will help with this due to the data checking being carried out).

(7) Publicly available price data about retail shops are also mostly missing. To obtain up-to-date price data they must be purchased from Green Marketing Agency which implements the price data monitor in supermarkets.

(8) Import and export data (outside the EU) are available at the Ministry of Agriculture in the form of export/import authorisations. However they need to be processed and published. Limited (none) data are available on imports and exports within the EU (including the problem of so-called re-exports). Estimates of proportions imported/exported are available from the IAEI survey among actors in the organic sector.

(9) Publication of the Czech organic market data reports depends on money allocated by the Ministry of Agriculture (due to budget constraints the amount of money is decreasing, which creates problems in data collection; attempts to incorporate universities to collect the data through student theses failed).

(10) In many case those who ask for organic market data do not know how to work with the data provided. For instance, there have been examples of requests being made for data which is already available, in a more detailed form, in published reports.

(11) The priority data needs on a national level are not clearly defined. It is felt that there is a lack of information about who needs the data, what data they require and what use will be made of the data. It is felt that an authority needs to declare which data are needed and what are the priority data.

(12) Existing data do not enable prognosis or answers to some crucial questions (e.g. it is difficult to consider outputs if there is no data available about inputs – it is difficult to answer a question as to whether production of 50,000 kg of butter is optimal if there is no information about the inputs into this production).

The costs of gathering the data through control bodies (questionnaires are disseminated to every actor in the organic sector when visited by control body inspector) is 700,000.00 CZK[15], incl. VAT (about 25,500 EUR). The sum is paid by Ministry of Agriculture through Institute of Agricultural Economics and

[15] 1 EUR = 27.5 CZK

Information (IAEI) to control bodies. Control bodies complain that the sum is low (that is why in 2012 the Institute and Ministry of agriculture considered using students to get the data but this idea was rejected because the organic sector actor would not feel any duty to provide them with the data). In 2011 Ministry of Agriculture paid 1,000,000 CZK for data gathering but in 2012 decreased the sum to 700,000 and the control bodies were highly reluctant to collect the data. Other costs are the personnel costs for the person who processes the data at IAEI. These data on personnel costs are difficult to obtain. The person works on the data processing for only 0.25 of her full time work and the personnel costs are about 100,000 CZK (3,600 EUR). Generally speaking the cost of gathering and processing the data is between 800,000 CZK – 1,100,000 CZK.

The other data are collected through the FADN survey. Therefore it is difficult to separate the costs of the whole FADN survey and the FADN done for the organic sector sample. The costs (budget) of FADN which are under EU (DG AGRI) are about 14,000,000 EUR per year. The total cost of FADN in the Czech Republic in 2012 was 17,368,314 CZK (about 630,000 EUR). The cost per farm differs based on its size and farm type (production). On average the cost per farm (conventional or organic) is 8,000 CZK (EUR 290). For 258 organic farms (large scale farms of commercial type and family farms) the average costs would be more than 1,260,000 CZK (FADN at family farms is more costly) – about 46,000 EUR.

The price data which are gathered by Green Marketing are even more costly. Because the data are sold to private customers of Green Marketing (they are collected to be marketed) Green Marketing did not provide us with their costs (as they are commercially sensitive). We only know that Green Marketing collects data 6 times in 12 retail chains (supermarkets, hypermarkets, discounts, wholesale shops, drugstores and chemists chains). In 2013 Green Marketing surveyed almost 2900 organic items for their retail price. The costs of the Green Marketing BioMonitor (organic items price monitoring) involve data collection, quality checks, processing and coding of collected data, creation and maintenance of the database, production of the reports and their analysis including the commentary for the analysis. For 2014 Green Marketing plans to expand the data collection on prices to alternative food networks (farmers' shops, farmers' markets, box schemes) and also to small-scale organic food shops. They would also like to compare the prices of selected organic and conventional foods in a regular way. The ideas of how to expand the activities for 2014 were also partly inspired by OrganicDataNetwork project and our discussion on how to improve data collection in the Czech Republic.

Mediterranean (Produced by: Marie Reine Bteich, Patrizia Pugliese and Lina Al-Bitar on the basis of reports by national experts[16])

As part of case study of the organic data network project, CIHEAM-IAMB worked closely with MOAN country delegates and representatives of other relevant institutions and organisations to carry out an analysis of the state-of-the-art of the organic data system in the six targeted MOAN countries, namely, three countries from south Eastern Mediterranean - Lebanon, and Tunisia - and three EU Candidate and Potential Candidate countries - Albania, Serbia and Turkey.
In the case of Morocco, due to circumstances outside of the control of the project, formal institutional agreements for inclusion of some data in the MOAN report in 2014 were only reached late in summer, which made it impossible to carry out this step of the case study.

Turkey (country report prepared by Firat Kon and Erdal Süngü[17])

Production data

Production area/number data

Crop areas and livestock numbers for organic farming as well as organic operator numbers are collected by the nineteen control/certification bodies (CBs) operating in Turkey (ANADOLU, ANKA Global, BCS ÖKO GARANTIE, Bio.Inspecta, C.U (SKAL), CERES, ECAS, ECOCERT, EGETAR, EKOTAR, ETKO, ICEA, IMC, IMO Control, Kalitest, NISSERT, NOPCERT, ORSER, TURKGAP). Data are collected as part of the certification process and are compulsorily provided to the Ministry of Food, Agriculture and Livestock (MFAL) through the national Organic Farming Information System (OFIS). OFIS is a software tool developed by MFAL to record all information and data related to organic agriculture and to control and cross-check subsidy supports in Turkey. It was introduced as a data collection system in 2005 and has been used actively by MFAL and the CBs since then. It works by using a web based network system and therefore it is able to create networks among authorized institutions of the Turkish Data Collection System (CBs, MFAL and MFAL provincial directorates). OFIS allows direct data entry and modification.

The department responsible for the organic statistical data and competent authority for the organic agriculture sector activities within MFAL is the Good Agricultural Practices and Organic Department within DG Plant Production. The Department of Good Agricultural Practices and Organic Farming publishes yearly, in Turkish, a summary of these data in different Excel sheets on the Ministry webpage (www.tarim.gov.tr) including:

- The evolution for the past 10 years of the organic and in-conversion plant production areas, number of farms, total area under organic management (ha), total organic wild and natural collection area (ha), total organic cultivated area (ha) and total organic production quantities (tonnes).
- The organic and in conversion plant production by province and product type (total number of farms, total area, total cultivated area, total wild and natural collection area, total fallow area, total production quantity).
- The organic and in conversion livestock production by province and product type (total number of farms, total number of animals, total meat production, total milk production, total number of eggs, total number of hives and total production quantities).

[16] Centro internazionale di alti studi agronomici mediterranei – Istituto agronomico mediterraneo di Bari, Italy
[17] Ministry of Food Agriculture and Livestock, Turkey

MFAL annually compiles the collected data on production in the Eurostat format and sends it to MOAN who publish the data as part of an update report on the organic sector in the Mediterranean. However, OFIS does not include any international classification of data; it has its own product list for crops and livestock prepared alphabetically. The OFIS list of products (crops and animal) comprises raw material assumed as fresh unprocessed products. Therefore, compiling the Eurostat format is time consuming and is highly subject to human errors (in classifying data, translation to English).

Table B 29: Turkish production (number and area) data quality assessment

Quality assessment	Description
Accuracy	
Data source	CBs / MFAL
Methods of data collection	CB inspection records / OFIS at MFAL
Sample size	All certified producers
Estimated coverage	100%
Comments	
Coherence and comparability	
Coherence and comparability of the data collection method	Data can be compared on a year-by-year basis
Disaggregation of data	Geographical and organic status disaggregation
Comments	
Accessibility	
Voluntary or compulsory to provide data	Compulsory
Availability of data	Publically available on MFAL webpage
Format of publication	Excel tables
Comments	Available only in Turkish
Timeliness	
Frequency of data collection	Annual
Frequency of publication	Annual
Comments	

Production volumes, yields, and value data

Crop production volumes and per unit yields are collected by CBs and inputted into OFIS. Other information such as the starting date of production and the date of harvest are also available for all crops. The data on production volumes and yields are initially available as estimated figures in OFIS. Yields are estimated according to the product type, location of the land and other site conditions identified during the first control and volumes are computed based on yield estimates and available land area figures. After harvesting, each operator must submit the final crop production volumes to the CB that has to update OFIS figures.

Livestock production volume data (e.g. meat, milk) are collected by the CBs based on the effective product quantities certified (e.g. meat, milk, eggs, etc.).

No data about organic production values are collected.

Table B 30: Turkish production volumes data quality assessment

Quality assessment	Description
Accuracy	
Data source	CBs/ MFAL
Methods of data collection	CB inspection records / OFIS
Sample size	All certified producers
Estimated coverage	100%
Comments	
Coherence and comparability	
Coherence and comparability of the data collection method	Data can be compared on a year-by-year basis
Disaggregation of data	Geographical and organic status disaggregation
Comments	
Accessibility	
Voluntary or compulsory to provide data	Compulsory
Availability of data	Public
Format of publication	Excel sheets
Comments	Available only in Turkish
Timeliness	
Frequency of data collection	Annual
Frequency of publication	Annual
Comments	

Domestic trade/retail data

Retail volumes and values

Retail volumes and values data are not currently collected in Turkey.

Catering volumes and values

Catering volumes and values are not currently collected in Turkey.

International trade data

Import volumes and values

Import volume and value data are available in OFIS and collected by CBs through the product certificate compulsorily issued before the produce can be marketed or circulated for processing in the local market. Import volumes and values are publically available on the MFAL website in Turkish.

Export volumes and values

Export volumes and values of organic products are available in OFIS and correspond to the estimated volumes and values of exports collected by the CBs through the product certificates. However, the export data from OFIS have never been published or analysed. The published figures on export volumes and values are those collected since 1996 by the Aegean Exporters Association (AEA) and communicated to MFAL who publishes them in Excel tables on its web page.

AEA is a semi-governmental institution under the Ministry of Economy assigned to collect data on all exported goods. Export data are collected by AEA from customs declarations. AEA is also the coordinating association with the mandate to collate organic export data from the other existing 11 Exporters Associations (EAs) from throughout the country. AEA collects all declared organic export data through E-BIRLIK software. E-BIRLIK is an electronic system developed by the EAs to control all export activities online. It uses international product classification and codes (HS Code). It stores information on the exporter, the type, quantity and price of products, the destination country and the buyer. Exporters can perform the process of export declaration directly through E-BIRLIK to significantly reduce costs and save time. However, many exporters do not declare their organic exports, even though it is obligatory to state the organic status in E-BIRLIK and at the customs.

Since 2008 and after encountering various inconsistencies between OFIS and E-BIRLIK data, MFAL gave AEA access to OFIS to compare the organic export data stored in the two datasets. However, the comparison between the two datasets was not possible as the product classification was not harmonised.

Table B 31: Turkish Export volumes and values data quality assessment

Quality assessment	Description
Accuracy	
Data source	CBs / AEA
Methods of data collection	CBs product certificate / AEA export declaration
Sample size	CBs: all certified exporters / AEA: declared organic exports
Estimated coverage	CBs: 100% / AEA: low
Comments	
Coherence and comparability	
Coherence and comparability of the data collection method	Incomparable data
Disaggregation of data	No disaggregation is made
Comments	
Accessibility	
Voluntary or compulsory to provide data	Compulsory, but still incomplete
Availability of data	Publically available
Format of publication	Excel Tables
Comments	Available only in Turkish
Timeliness	
Frequency of data collection	Annual
Frequency of publication	Annual
Comments	

Prices

Price at farm level

Data on organic prices at farm level are not currently collected in Turkey.

Retail price

Data on organic retail prices are not collected in Turkey. However some studies have been conducted in the past years by ETO (Ekolojik Tarım Organizasyonu, the Organic Trade Organisation) and Marmara University in Istanbul to establish the price premium of some organic products and the results of these studies showed that the premium on the price varies from 10% to 25% according to product type and to the season.

Data gaps and issues

The investigation of the current Turkish data collection system was conducted by exchanging information between CIHEAM-IAMB and MFAL through MOAN representative, AEA and local experts. This description of the system heavily draws from previous research works carried out by CIHEAM-IAMB in cooperation with Turkish institutions in the framework of MOAN activity. The main data gaps and issues identified in the Turkish organic data collection system are:

- Data in OFIS have no classification and each CB has its own classification system. Therefore it is very complicated and time consuming to harmonise OFIS data according to international classification for comparison. Particularly due to:
    - interpretation mistakes as some products are entered under different local names;
    - spelling mistakes are recurrent;
    - no international codes are used for product identification.
- Data on production volumes and values available in OFIS are not exploited.
- Export data in OFIS are not exploited and are not comparable with the E-BIRLIK dataset.
- No quality checks are made for OFIS data verification.
- Export data (volumes and values) collected by AEA are not representative as many exporters do not declare their organic exports.
- Data on domestic trade and market are missing.
- Data on prices at farm and retail level are missing.
- There is no elaborated and detailed report on organic market data in Turkey but rather tables of the data for production, import and export, with no elaboration, comments or analysis.

Lebanon (country report prepared by Pauline Eid Saad[18])

Production data

Production area/number data

Data on total areas of crops and numbers of livestock and more detailed breakdowns by crop type (see below) are collected on a regular basis by the two control bodies (CB) operating in the country, namely IMC Lebanon and Libancert (which operated in the country until the end of 2013), through their regular and direct work with the organic operators. It is mandatory for CBs (enforced by a ministerial decision) to communicate their data on production areas and livestock numbers to the Ministry of Agriculture (MoA) by January 31st of each year. An *ad hoc* template has been developed and customised by MoA for this purpose. Since organic production areas in Lebanon are very small with several crop varieties grown on the same plot, detailed areas were reported only for the following crops or groups of crops: cereals, potatoes, apples, olives, table grapes, grapes for processing, fresh vegetables, citrus, fruits trees (other than citrus olives and grapes), forages, fallow land, meadows, nuts and wild collection.

Production area and livestock number data include information about the status of the organic production areas (organic or under conversion) and about new and withdrawn organic operators. Production area and number data are publicly available upon request at MoA to all organic stakeholders.

Table B 32: Lebanese production (number and area) data quality assessment

Quality assessment	Description
Accuracy	
Data source	CBs
Methods of data collection	CBs inspection records / MoA template
Sample size	All certified producers
Estimated coverage	100%
Comments	
Coherence and comparability	
Coherence and comparability of the data collection method	Data can be compared on a year-by-year basis
Disaggregation of data	Disaggregation of data is possible but has not been carried out.
Comments	
Accessibility	
Voluntary or compulsory to provide data	Compulsory: data is collected as part of certification process and CBs have to provide data to MoA
Availability of data	Publically available upon request
Format of publication	No publication is made
Comments	
Timeliness	
Frequency of data collection	Annual
Frequency of publication	No publication is made
Comments	

[18] Ministry of Agriculture, Lebanon

Production volumes, yields, and value data

Total and crop detailed organic production volumes are collected on a regular basis by CBs through their regular and direct work with the organic operators. Data on production volumes are calculated based on experts' estimates of the yields based on region and farm conditions. Production yields are input for all crops or groups of crops collected under the production area (cereals, potatoes, apples, olives, table grapes, grapes for processing, fresh vegetables, citrus, fruits trees (other than citrus olives and grapes), forages, fallow land, meadows, nuts, and wild collection). All organic production volumes must be communicated to MoA; input in a purposely developed template by January 31st of each year. Production volume data are neither elaborated nor published but are available upon request at MoA to all organic stakeholders.

No data about organic production values are collected.

Table B 33: Lebanese production volumes data quality assessment

Quality assessment	Description
Accuracy	
Data source	CBs
Methods of data collection	CBs inspection records / MoA template
Sample size	All certified producers
Estimated coverage	100%
Comments	
Coherence and comparability	
Coherence and comparability of the data collection method	Data can be compared on a year-by-year basis
Disaggregation of data	Disaggregation of data is possible but has never been carried out.
Comments	
Accessibility	
Voluntary or compulsory to provide data	Compulsory: data is collected as part of certification process and CBs have to provide data to MoA
Availability of data	Publically available upon request
Format of publication	No publication is made
Comments	
Timeliness	
Frequency of data collection	Annual
Frequency of publication	No publication is made
Comments	

Domestic trade/retail data

Retail volumes and values

Retail volumes and values are not currently collected.

Catering volumes and values

Catering volumes and values are not currently collected.

International trade data

Import volumes and values

Many importers of organic products are not registered with the control bodies (due to the lack of a national law, they can import and sell their products with the organic logo of the country of origin), even though the organic ministerial decision issued two years ago mentions that all organic operators including importers must be registered with the control bodies operating in Lebanon. Registration of importers with the local control bodies would ensure proper control as well as access to data related to imported organic products.

MoA requested the customs to add codes enabling the differentiation of organic products from conventional ones and enabling tracking of the types and volumes of imported organic products. However the response was that this request cannot be met since they would need to create a very large number of codes for all imported organic products and that this could be carried out only for some selected crops or items that MoA considers it strategic to track.

Export volumes and values

Detailed data about organic export volumes are available in CBs registers, but MoA do not collect or analyse them.

Prices

Price at farm level

Prices of organic products at farm level are not currently collected.

Retail price

Many types of retail marketing channels were identified; organic products are sold in farmers markets, supermarkets, delivered to houses in boxes or baskets and in organic shops. The retail prices of organic products are not collected.

Data gaps and issues

The investigation of the current Lebanese data collection system was conducted through information exchanges between CIHEAM-IAMB and MoA through the country's MOAN representative, Head of the Technical Organic Committee. The main data gaps and issues identified in the Lebanese organic data collection system are:

1. Lebanon is a small country and its agricultural lands are relatively very small, most of the farmers tend to grow a large variety of crops (especially vegetables and citrus trees) in the same field with no specific dominance of one crop over another which makes it very challenging to estimate the production area for each crop.
2. Domestic retail market data have never been collected.
3. International trade (import and export) data have never been collected.
4. Prices, at farm level and retail level, have never been collected.

Serbia (country report prepared by Jelena Milic and Jelena Vasiljevic[19])

Production data

Production area/number data

Data on crop areas, livestock numbers and number of operators are collected by the authorized control bodies (Organic Control System, TMS CEE, Control Union Danube, ECOCERT Balkan, ETKO Panonia, Suolo e Salute Balkan) as part of the certification process. Data collected by the authorised CBs are delivered annually to the Ministry of Agriculture and Environmental Protection (MAEP), the national competent authority. In accordance with the Law on Organic Production, each CB must keep records of its certified operators and submit an annual report comprising all collected information to the department for organic production at MAEP no later than the 31st of January. Received data are kept in Excel files and processed once a year at the Department for organic production of the Ministry where records on organic production area and number of operators have been kept since 2008. The set of records used and kept by CBs are defined and described in the Rulebook on the control and certification and organic production methods. However, the classification of data stored is not fully in line with Eurostat or any particular internationally known classification.

Table B 34: Serbian production (number and area) data quality assessment

Quality assessment	Description
Accuracy	
Data source	Authorized CBs / MAEP
Methods of data collection	CBs inspection records
Sample size	All certified producers
Estimated coverage	100%
Comments	
Coherence and comparability	
Coherence and comparability of the data collection method	The data can be compared on a year-by-year basis
Disaggregation of data	A disaggregation of data is made by MAEP (by type of crops, by geographical division (districts), by number of producers by districts, by organic status) but not published on the website
Comments	
Accessibility	
Voluntary or compulsory to provide data	Compulsory: data is collected as part of certification process and CCBs have to provide data to the Ministry
Availability of data	Public
Format of publication	Website of MAEP
Comments	
Timeliness	
Frequency of data collection	Annual
Frequency of publication	Annual
Comments	

[19] Ministry of Agriculture and Environmental Protection, Serbia.

Data on organic production are published on the website of MAEP (operator name, place of production, status (conversion or full organic) and type of production, as well as area under organic production by type of product).

http://www.dnrl.minpolj.gov.rs/novo%20organska/Spisak_proizvodjaca_organskih_proizvoda.pdf.

In order to improve the entries and the processing of data on organic production, the Ministry, in cooperation with GIZ, developed a software to facilitate monitoring of organic production. Starting from 2015, authorized CBs should begin using this software that allows continuous update of the production data throughout the year, and should at any time be able to elaborate the state-of-the-art figures.

Production volumes, yields, and value data

Organic production data (volume and value) are communicated to MAEP by the authorized CBs as required by the organic Law. These data are not publicly available.

Production volumes communicated by CBs are calculated by CBs' experts based on crop yield estimates and the crop areas. These estimates draw on specific parameters such as the current and expected weather conditions in a given season, the management of organic production on a given land parcel, the location and the quality of the soil. Therefore, yields for the same species can vary from season to season and/or in different locations.

Data on production values are not complete as some producers do not provide CBs with such data even if required. In some cases, producers do not have available production values and/or they consider such values to be commercially sensitive.

Table B 35: Serbian production (volume and value) data quality assessment

Quality assessment	Description
Accuracy	
Data source	Authorized CBs
Methods of data collection	Production: based on estimated yields Values: producers, authorized CBs and MAEP estimates.
Sample size	All certified producers
Estimated coverage	100%
Comments	
Coherence and comparability	
Coherence and comparability of the data collection method	Comparability of data can be made on year-by-year basis
Disaggregation of data	By type of crops
Comments	
Accessibility	
Voluntary or compulsory to provide data	Compulsory: data is collected as part of certification process and CBs have to provide data to MAEP
Availability of data	
Format of publication	No publication is made
Comments	
Timeliness	
Frequency of data collection	Annual
Frequency of publication	No publication is made
Comments	

Domestic trade/retail data

Retail volumes and values

Retail volume and value data are not currently collected in Serbia.

Catering volumes and values

Catering market data (volumes and values) are not currently collected in Serbia.

International trade data

Import volumes and values

Import volumes and values of organic products are collected by CBs. Authorized CBs are compelled to issue, for all certified imported organic products, a confirmation document that verifies that the product is produced in accordance with the Serbian Law on organic production and its regulations, prior to their distribution on the local market or to the sector operators for processing. The confirmation document is released on the basis of performed control of documents and certificate issued by the competent authority in the country of origin of the imported product. CBs must communicate annually all data on organic import volumes and values to MAEP no later than the 31st of January. However, the values of imports are not always communicated by the importers. They either are missing or, in most cases, are estimated by CBs.

Export volumes and values

Data on export volumes and values of organic products are collected from two sources: from customs and from authorized CBs.

It is compulsory for organic exporters to specify in the relevant section of the customs declaration that the product is organic and to report the number of the certificate to be attached to the customs declaration. For export clearance of certified organic products, the column No. 31 (Packing and listing of goods, markers and numbers – container number - Number and type) of the Single Administrative Document (SAD) must include the data confirming the organic status of the products, and column No. 44 (Submitted documents and additional information) must include the number of the certificate issued by an authorised CB accompanying the customs document. The entered data become an integral part of the Customs Service information system, where records on exported organic products are kept. As for imports, exports values are often missing or roughly estimated as exporters do not want to declare the exact value of their merchandise.

Authorised CBs collect data on export volumes and values from the certified exporters and communicate them to the Ministry through the annual report they deliver by the end of January. However, these figures are projections that do not represent the real export situation recorded at the customs. The data on organic exports at customs are classified according to the EU Customs Tariff Nomenclature as since 2005, Serbia and the EC and members states signed the stabilisation and association agreement that mandates Serbia to respect the EU Customs Tariff Nomenclature.

Table B 36: Serbian international trade data quality assessment

Quality assessment	Description
Accuracy	
Data source	Import: Authorized CBs Export: customs and CBs
Methods of data collection	Import: CBs product certificates Export: customs declaration in the Unique Customs Document
Sample size	Import: All imported products certified by authorised CBs Export: Declared exports from customs/ data on exports CBs
Estimated coverage	Import/Export volumes: complete Import/Export values: partial for certain products
Comments	
Coherence and comparability	
Coherence and comparability of the data collection method	The data can be compared on a year-by-year basis
Disaggregation of data	
Comments	
Accessibility	
Voluntary or compulsory to provide data	Compulsory
Availability of data	Not available to the public
Format of publication	No publication is made
Comments	
Timeliness	
Frequency of data collection	Annual
Frequency of publication	No publication is made
Comments	

Prices

Price at farm level

Data on organic prices at farm level are not currently collected in Serbia.

Retail price

Data on organic retail prices are not regularly collected in Serbia. However, a survey was conducted by GIZ in 2013, on selected organic and conventional fresh fruits and vegetables, based on a sample of four retail outlets in Belgrade (two greenmarkets and two retail outlets) and two in Novi Sad. This survey allowed them to establish an average retail price variation range taking into consideration the seasonal variation of the fresh products.

Data gaps and issues

The investigation of the current Serbian data collection system was conducted through information exchanges between CIHEAM-IAMB and MAEP through the MOAN representative and the officer handling the statistics of the organic sector. The main data gaps and issues identified in the Serbian organic data collection system are the following:

1. The method of storing collected data at the Ministry is partially harmonized with Eurostat: number of operators, crops areas and animal numbers are in line with Eurostat while data on organic animals are not disaggregated into subcategories such as animals for slaughter, breeding females, dairy females and fattening categories. Additionally, no data on organic aquaculture are yet collected.
2. Data on production values are not accurate as CBs use in some cases the estimated value of production at farm gate and in others the value of the product on the market when sold as organic and therefore data cannot be compared or cross-checked.
3. Lack of a system for monitoring domestic retail data:
    a. There is no data on availability of organic products in supermarkets: range and product availability on the shelf.
    b. There is no data on sales through non-multiple sales channels such as box schemes, farm shops, and farmers' markets.
4. Export and import value data are not complete.
5. Price at farm level and retail price are not available.

Albania (country report prepared by Fatmira Allmuça[20] and Sokol Stafa[21])

Production data

Production area/number data

Total and detailed (by crop) organic production area and livestock number data are collected in parallel by the Ministry of Agriculture, Rural Development and Water Administration (MARDWA) through its regional offices and by the control bodies (CBs) operating in the country as part of their inspection and control activities.

Officially recognised CBs are required by law (Law no. 9199 issued in 2004; Decree no. 639 issued in 2005) to communicate yearly production area and livestock number data to MARDWA. However, the law is not yet fully enforced, therefore in order to get a comprehensive picture of the sector, ministerial officers dealing with organic farming issues regularly keep informal contacts with (and collect data from) CBs operating in the country as well as with NGOs, associations, research institutes and private companies involved in the organic sector. At the same time, the Ministry also collects data directly from operators through its agricultural regional offices.

In the 2011 edition of the MARDWA agricultural statistical yearbook one table summarising the situation of the national organic sector in relation to production land **area** and the **number of farms** was included for the first time. Data were disaggregated by crop category (vegetables, spices, cultivated medicinal plants, fruit trees, olive trees, vineyards, citrus, other) and by region. Such data has been collected at the local level by the agricultural regional offices/departments.

More recently, in the framework of the restructuring of national agricultural statistics, INSTAT (the Albanian institute for statistics) has been charged to include in the questionnaire used for its annual survey, a section specifically devoted to organic agriculture. No data have been published yet.

In recent years, various local experts' studies, masters' students' dissertations and international donors' projects have also gathered and published data on the Albanian organic sector.

However, discrepancies have often been observed between the data provided by the different sources.

Table B 37: Albanian production (number and area) data quality assessment

Quality assessment	Description
Accuracy	
Data source	CBs MARDWA
Methods of data collection	CBs inspection records and personal communication MADRWA regional offices' survey MARDWA data coordination from different sources (cross check) – regional agriculture offices, CBs
Sample size	All certified producers
Estimated coverage	100 %
Comments	
Coherence and Comparability	
Coherence and Comparability of	-

[20] Ministry of Agriculture, Rural development and Water administration (MARDWA)
[21] Albinspekt

the data collection method	
Disaggregation of data	Disaggregation at regional level is possible
Comments	
Accessibility	
Voluntary or compulsory to provide data	1. Data is collected as part of the control and certification process and authorised CBs are required to provide data to MARDWA (although the law is not yet fully enforced) 2. MADRWA regional offices gather data on organic farming as part of their regular activities
Availability of data	-
Format of publication	Thus far, data on organic agriculture have only been published in the MADWRA statistical yearbook in 2011. Some additional data are also published in reports produced by NGOs, private organisations and international agencies.
Comments	
Timeliness	
Frequency of data collection	Annual
Frequency of publication	Officially published only in 2011
Comments	

Production volumes (e.g. yields) and values

Data about production volumes are collected by the control bodies (CBs) operating in the country as part of their inspection and control activities.

Only in the 2011 edition of the MARDWA agricultural statistical yearbook one table summarising the situation of the national organic sector in relation to production **volumes** was included. Such data were disaggregated by crop category (vegetables, spices, fruits, citrus, olives and grapes) and by region. Data about production volumes of the most important processed products, like wine, raki and olive oil, were also included. Such data has been collected at the local level by the agricultural regional offices/departments.

Possibly some data will become available in the future from INSTAT which has recently been charged to include a section about organic agriculture in the questionnaire used for its annual survey although no data resulting from this have been published yet. In addition, various local experts' studies, masters' students' dissertations and international donors' projects have also gathered and published data on the Albanian organic sector although discrepancies have often been observed between the data provided by the different sources.

In general, no data about organic yields are collected and analysed, but exceptionally in 2011 the volumes were included in a table in the yearbook based on CBs data.

Table B 38: Albanian production volumes data quality assessment

Quality assessment	Description
Accuracy	
Data source	1. CBs 2. MARDWA (only in 2011)
Methods of data collection	1. CBs inspection records and personal communication

	2. MADRWA regional offices' survey (only in 2011) 3. MARDWA data coordination from different sources (cross check) – regional agriculture offices, CBs (only in 2011)
Sample size	All certified producers
Estimated coverage	100 %
Comments	
Coherence and Comparability	
Coherence and Comparability of the data collection method	-
Disaggregation of data	Disaggregation at regional level is possible
Comments	
Accessibility	
Voluntary or compulsory to provide data	1. Data is collected as part of the control and certification process and authorised CBs are required to provide data to MARDWA (law not fully enforced yet though) 2. MADRWA regional offices gathered volume data on organic farming as part of their regular activities (only in 2011)
Availability of data	-
Format of publication	Published in MADWRA statistical yearbook on agriculture only in 2011 Some data are often also published in reports produced by NGOs, private organisations and international agencies.
Comments	
Timeliness	
Frequency of data collection	Annual
Frequency of publication	Officially published only in 2011
Comments	

Domestic trade/market data

Retail volumes and values

Retail volumes and values are not collected and very little is known about the limited domestic market, which is mainly concentrated in Tirana. Some information is available from local market experts and associations like the Albanian Association of Marketing. Also some studies have been carried out by masters' students and international organisations on consumer analysis and consumer awareness and preferences covering some aspects of the organic supply chain, but no exhaustive study including data on volumes and values, is available to date.

Catering volumes and values

Catering volumes and values are not collected.

International trade data

Data on international trade in Albania is limited to some rough estimates and evaluations made by local experts on the sector, no official data exist.

Import volumes and values

Import volumes and values are not collected.

Export volumes and values

Export volumes and values are not collected.

Prices

Price at farm level

Prices of organic products at farm level are not collected.

Retail price

Retail prices of organic products are not collected.

Data gaps and issues

The investigation of the current Albanian data collection system was conducted through information exchanges between CIHEAM-IAMB and the Ministry of Agriculture, Rural Development and Water Administration (MARDWA) through the country's MOAN representative and a national expert.

Following these discussions, the main data gaps and critical issues identified in the Albania organic data collection system were:

1. Only basic production aspects are covered by existing regular data collection on the organic sector. No regular data collection and dissemination exist on many other important aspects, like domestic market development and international trade for which only some expert estimates could be found.
2. Despite the valuable efforts of national organic data collectors and holders, existing data about the organic sector are still partial, fragmented and often inconsistent.
3. Various data are available from different public and private sources with significant inconsistencies between them. Such inconsistencies are mainly due to different data collection methods and the use of different classifications.
4. With specific regard to production data, the partial implementation and enforcement of the national law on organic agriculture has so far hindered the carrying out of an official, regular, and mandatory data collection from all CBs operating in the country.
5. Apart from information included in the statistical yearbook on agriculture, dissemination of facts and figures on the organic sector has so far relied on contingent efforts of international donors and projects.

Tunisia (country report prepared by Samia Maamer[22])

Production data

Data on production and operators are collected by the approved control/certification bodies as part of the inspection and certification process. According to the national regulation[23], all CBs are required to submit the information collected from their operators to the national competent authority, the *Direction Générale de l'Agriculture Biologique* (DGAB) of the Ministry of Agriculture (MoA), created in 2010[24] which hosts the secretariat of the National Commission of organic agriculture.

The DGAB contributes to the development of the national regulations, supervises the organic certification system, elaborates strategies and action plans for the development of the organic sector and of organic supply chains; guarantees the management of the national organic label, manages the implementation of support programmes for organic agriculture and supports projects and investments in the organic sector, ensures the collection and diffusion of information about the national organic sector, facilitates international cooperation and represents MoA at the international level on issues related to organic agriculture; and hosts the permanent secretary of the National Commission for organic agriculture.

Data are compiled by CBs using templates specifically developed by DGAB. Only data on organic producers are delivered monthly, which allows DGAB to have updated information at any time. The other data are compiled and delivered annually.

Data collection on operators and production started in 2005. Collected information are stored in electronic form at the DGAB and are processed annually and made publicly available on the website of MoA (https://www.ministere.tn) as well as on the website of the Technical Centre of Organic Agriculture (Centre Technique de l'Agriculture Biologique – CTAB, http://www.ctab.nat.tn/).

A database (and the associated software) to store data about the organic sector in Tunisia, named *"Manage bio"* (Manage organic) was developed and launched by MoA in the framework of an FAO project *(Projet d'Appui au Développement et à l'Organisation de l'Agriculture Biologique en Tunisie, 2003-2004)*.

Different development steps and different usage levels have been envisaged for this database. The first phase, named "*Stat bio*", already implemented, is an application allowing the monitoring of data per operator by DGAB, taking into account three types of operators: producers, processors and exporters. Detailed information can be stored by DGAB about: *i)* operator's personal data (full name, address and contacts details); the farm/holding (geographical location, organic, in conversion and conventional land areas; farming methods), *ii)* cultivated crops (status: fully converted /in conversion, type of crops, area and production volume per cropping period); *iii)* animal production (status: fully converted /in conversion, number of heads and production volumes); *iv)* processing unit (geographical location, processing methods, type of processing unit, operators' identification, input and output by product and quantities, product code); *v)* exporting unit (origin of product by operator, product code, product quantities and destination).

[22] Ministry of Agriculture, DGAB

[23] Décret n°2000-409 du 14 février, fixant les conditions d'agrément des organismes de contrôle et de certifications et les procédures de contrôle et de certification dans le domaine de l'agriculture biologique.

[24] Décret n° 2010-625 du 5 avril 2010, modifiant et complétant le décret n° 2001-420 du 13 février 2001, portant organisation du ministère de l'agriculture. Direction Générale de l'Agriculture Biologique (DGAB).

Such a level of detail allows DGAB to annually acquire and analyse data on areas under organic production and operators by governorate, by CBs, by crop and type of activity as well as giving complete information about organic processing units including details about product quantities and origin. Other types of analysis of stored data could be carried out as well producing specifically customized outputs. The database has recently been further improved and more detailed analysis will be possible in the near future.

In a second phase, the "*Manage bio*" database is planned to be used to provide a traceability coding system for all organic products. However, this phase is not yet fully implemented and has been tested so far only on the artichoke industry; also a program for the installation of the required software interfaces is currently running for processors of olive oil and dates companies.

Production area/number data

Table B 39: Tunisian production (number and area) data quality assessment

Quality assessment	Description
Accuracy	
Data source	Authorised CBs/DGAB
Methods of data collection	CBs inspection records/form developed by DGAB
Sample size	All certified producers
Estimated coverage	100%
Comments	
Coherence and Comparability	
Coherence and Comparability of the data collection method	The data can be compared on a year-by-year basis. Organic statistics are increasingly integrated with national agricultural statistics. Tunisian organic statistics are feeding/contributing to world and Mediterranean organic statistics without major difficulties.
Disaggregation of data	Land area data are disaggregated by Governorate and crop/product type.
Comments	
Accessibility	
Voluntary or compulsory to provide data	Compulsory: data is collected as part of the inspection and certification process and CBs must provide data to DGAB.
Availability of data	Publicly available on MoA and CTAB websites.
Format of publication	pdf tables.
Comments	
Timeliness	
Frequency of data collection	Monthly for operators, annual for the other data.
Frequency of publication	Annual.
Comments	

Production volumes and value data (e.g. yields)

Data on production volume and value are obtained from approved CBs and submitted to the DGAB yearly. Data on production values are available dating back to 2005.

Data on production volumes of organic products are complete and calculated on the basis of average crop yields estimated by the CBs. Average crop yields are estimated taking into account various specific parameters: weather conditions, technical management factors, geographical location, and soil quality.

Total production volumes and values are published yearly on MoA (http:/agriculture.tn) and CTAB (http://www.ctab.nat.tn/) websites.

Before publishing production data (area, number, volumes and values) the DGAB carefully checks data provided by CBs by comparing them with previous years' data and cross-checking them with field data on organic land area and production volumes collected. This is carried out in each Governorate, by local staff working at the *Commissariat Régional au Développement Agricole* (CRDA), a MoA-supervised structure charged with the implementation of national agricultural policies at the regional level.

Table B 40: Tunisian production (volume and value) data quality assessment

Quality assessment	Description
Accuracy	
Data source	Authorised CBs/DGAB.
Methods of data collection	CBs inspection records/form developed by DGAB.
Sample size	All crop and animal production.
Estimated coverage	100%
Comments	
Coherence and Comparability	
Coherence and Comparability of the data collection method	The data can be compared on a year-by-year basis. Organic statistics are increasingly integrated with national agricultural statistics. Tunisian organic statistics are feeding into world and Mediterranean organic statistics without major difficulties.
Disaggregation of data	No disaggregation
Comments	
Accessibility	
Voluntary or compulsory to provide data	Compulsory: data is collected as part of certification process and CBs have to provide data to the DGAB.
Availability of data	Publicly available on MoA and CTAB websites.
Format of publication	pdf tables.
Comments	
Timeliness	
Frequency of data collection	Annual
Frequency of publication	Annual
Comments	

Domestic trade/market data

At present no data (nor database) is available about the domestic market in Tunisia. Some rough estimates of domestic market volumes and values are produced by deducting export values from total production ones.

Although the legislation requires CBs to keep a stock inventory at the operator level through tracking the transactions records, such information is used by the competent authority exclusively when audits are made on CBs or when some suspicious activities are detected. Moreover, in Tunisia the local market for organic products is not yet well developed compared with the export market and a large share of certified organic products are sold as conventional on the local market making it difficult to trace back the product.

Since the DGAB was only established in 2010 and has been progressively strengthened since 2012, the monitoring of the domestic market remains underdeveloped and only a few figures have been available in the last years through some project and research work carried out by masters' students.

Retail volumes and values

Retail volume and value data are not collected in Tunisia.

Catering volumes and values

Catering volume and value data are not collected in Tunisia.

International trade data

Import volumes and values

No specific classification code is used at the customs level for organic imports and no additional control by authorised CBs is required in Tunisia on imported organic products.

Limited data are available on organic import volumes and values only for some products (for example, some special dietary products) which are imported into Tunisia under specific regulatory frameworks and through specific inspection and control procedures of the Ministry of Trade and of the Ministry of Health. Such data are not publicly available.

Export volumes and values

No specific classification code is used at the customs level for organic exports either.

In order to identify organic exports and gather relevant data, the DGAB has established a system for export authorization. The DGAB grants export authorisations only for products that are certified by an authorised CB, after examination of a technical dossier which is specifically prepared to provide evidence of the fulfilment of the required conditions.

This technical dossier allows the DGAB to have a complete and continuous monitoring system and to keep a statistical database of all export operations. So far these data have only been analysed in a relatively basic way, since 2011. The DGAB plans to improve the analysis of these data and make it available to professionals and interested stakeholders of the organic sector in order to further contribute to the development of the organic market.

Data on export volumes and values include details about the exporter, the product type, code, origin and destination. Export volumes and quantities are published annually, disaggregated by product on MoA and CTAB websites. Aggregate qualitative indications about the countries of destination of Tunisian organic exports are also provided.

Table B 41: Tunisian international trade data quality assessment

Quality assessment	Description
Accuracy	
Data source	Import: Ministry of Trade; Ministry of Health Export: DGAB.
Methods of data collection	Import: administrative data collected in the implementation of Ministry of Trade and Ministry of Health rules and procedures. Export: export authorisation system managed by DGAB.
Sample size	
Estimated coverage	Import: only for specific products. Export: 100%.
Comments	
Coherence and Comparability	
Coherence and Comparability of the data collection method	

Disaggregation of data	Export: volumes and values by product; aggregated qualitative indications of countries of destination of Tunisian organic exports.
Comments	
Accessibility	
Voluntary or compulsory to provide data	Export: compulsory.
Availability of data	Export data: publicly available on MoA and CTAB websites.
Format of publication	pdf, word tables.
Comments	
Timeliness	
Frequency of data collection	Export: linked to the export authorisation system managed by DGAB .
Frequency of publication	Export: annual. Import: no publication.
Comments	

Prices

Price at farm level

To date, not much information exists about production costs and prices at farm level for organic products in Tunisia; no regular data collection system is in place to make use of data available at the operator level. Only a few research projects have been carried out so far on production costs of olive oil and dates in the framework of masters' studies.

Retail price

The local market is still under-developed and limited to the cities of Tunis and Sousse, where some supermarkets and specialised shops offer organic products. To date, no monitoring of retail price has been carried out, only a few masters' theses and academic works identified the organic products sold locally, their quantities and prices; other studies were carried out on consumer perception of organic products. Rough estimates and non-exhaustive information exist on price differences between organic and conventional products. According to available data, collected by the DGAB through annual campaigns targeting selected organic products, organic olives and organic olive oil prices are 10 to 20% higher than the conventional ones while for dates the difference is 20%.

Data gaps and issues

The investigation of the current Tunisian data collection system was conducted through information exchanges between CIHEAM-IAMB and the Ministry of Agriculture through the MOAN representative, head of the DGAB. The main data gaps and issues identified in the Tunisian organic data collection system are the following:

1. No system is in place to allow CBs to directly enter into the "*Manage bio*" database the data that they are required to periodically send to the competent authority. The data entry is done by DGAB staff on the basis of the forms compiled by CBs, which is clearly more time-consuming and likely to be affected by human error even if it provides an opportunity to double check data and enhance their accuracy.
2. Production data are not currently collected and stored under any specific international classification. However, Tunisian organic statistics are increasingly integrated into national agricultural statistics and no major problems have been detected so far when Tunisia is

requested to contribute to regional and world organic statistics in the framework of longstanding collaboration initiatives between national organic institutions and foreign organisations working in the field of organic statistics, like CIHEAM-IAMB through MOAN, with specific reference to the Mediterranean region, and FiBL for the world statistics.

3. Production costs and prices at farm level are not available since no systematic data collection is made at the producer level.
4. Retail prices are not available for organic products in Tunisia, only estimates of price differences between organic and conventional exist for some products.
5. Import data are not complete due to the absence of specific classification codes for organic products at customs level.
6. Export data are collected but so far they have only been presented in an aggregated way (not disaggregated by product and country of destination); also they are not classified according to any international classification.
7. Information and data about specific issues, like stocks at the producer/operator level, product destination on the local market, share of organic sold as conventional and imports remain fragmentary.
8. Data analysis remains relatively basic due to the lack of human resources to devote to this task.

Appendix C: Experience of carrying out the case study

UK (by Catherine Gerrard[25] and Martin Cottingham[26])

UK case study objectives

The Organic Research Centre worked closely with the Soil Association on the market report and, in particular, the two organisations:

- Carried out activities to improve forecasting of production trends:
    - Improving timeliness of publication of production data;
    - Improving forecasting of production data - carrying out a producer survey in England to complement those being carried out on an annual basis in Wales and Scotland. In particular, asking about future plans with regards to production levels and remaining certified organic;
    - Attempting to calculate a supply balance equation for milk.
- Carried out further, more detailed analysis of retail data to see whether it can be used to give more detailed information and trends.
- Considered the data collection options to obtain greater coverage of sales through non-multiple channels (box schemes, farmers' markets, farm shops, catering, independent shops) and attempted to add more information on these sectors into the market report.

Improving timeliness of publication of production data

During a stakeholder meeting discussing UK organic data, held at The Organic Research Centre on 18th July 2012, the topic of more timely publication of UK organic production data was raised. Defra compiles inspection data from the control bodies (CBs) and publishes an annual overview of crop production areas and animal numbers for UK, and split by country (England, Scotland, Wales, Northern Ireland). These are also the data which are passed to Eurostat. The data are published in a separate Defra publication, which used to be available in May but had more recently been published in the late summer. The Defra statistics team explained that the reason for the delay was that they had to spend some time harmonising the data, as many of the CBs use their own categories (due to having custom built databases), and these needed to be allocated to the Eurostat categories. Furthermore, some categories had been entered as free text, therefore some data cleaning was required (e.g. "goat" and "goats" needed to be identified as the same category). Welsh categories additionally needed to be translated into English. Sometimes additional space characters had been added thus causing categories to look the same by eye, but be identified as different by the computer programme. The Defra team estimated that the total time taken for cleaning and analysing the data was 4-6 person weeks, depending on the amount of data cleaning required.

What additional data were collected?

No additional data were collected. It was agreed at a meeting on 22 November 2012, held at the Organic Research Centre, and attended by the Defra statistics team and representatives from the data arms of

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the CBs, that the CBs would provide, along with their data sent to Defra in January of each year to cover the preceding calendar year, a mapping of their data categories to the Eurostat categories.

What costs have been incurred? (Direct costs and time input)

For each CB, a small amount of additional time was required to compare their data categories with those from Eurostat, and then to provide Defra with a mapping between the two. However, this time cost would be matched by the reduction in time taken by the Defra statistics team, and as the CBs are more familiar with their own data, the hope was that they would take less time than would the Defra statistics team, thus providing an overall time saving.

Have stakeholder expectations been met?

Timeliness

The organic data for 2012 were published by Defra statistics on 13 June 2013. This compares with publication for the previous two years on 5 July 2012 and 11 August 2011. This suggests that the provision of the mappings by the CBs did succeed in expediting the process of data cleaning and collating for publication.

What data quality checks have been implemented?

No additional data quality checks were implemented as a result of this change, but Defra continues to monitor the data from CBs and carry out the same quality checks as previously. These standard data checks include checking values against historical data for comparability and querying any unusual values with the relevant control bodies.

Carrying out a producer survey in England

Surveys of organic producers have been carried out in Scotland (Mohamed Shahin, 2012 and previous similar reports) and Wales (Moakes, 2012 and previous similar reports) for a number of years. These surveys question producers about their current production levels and about their future intentions. The Welsh survey records production amounts for the previous year, whereas the Scottish survey records production for the first half of the year and estimates of future production for the second half of the year. Both surveys ask about the intentions of farmers further into the future (beyond 5 years in the Welsh survey and beyond 10 years in the Welsh survey). The surveys are carried out mainly by telephone (in the case of the Welsh survey from 2012 onwards, it will be carried out exclusively by telephone). Given the relatively small number of producers in those countries, all organic producers are surveyed and response rates are usually high (64% in Wales in 2012 and 81% in Scotland in 2012-13). The Welsh survey report quotes both the absolute values recorded by the survey and an extrapolation up to the entire Welsh organic production using the overall survey response rate. The Scottish report quotes the absolute values only.

The Scottish and Welsh surveys are very useful in providing an independent check on production data collected by CBs and collated by Defra. They also provide a means of estimating movements in the future organic market. For example, if a large number of Welsh sheep farmers indicate that they are considering reverting to non-organic production, then demand in the market for organic lamb may exceed supply at a point in the near future. The surveys can also be used to highlight issues in the market such as where large amounts of livestock raised as organic are being sold as conventional.

At present there is no corresponding survey of organic producers in England despite the feeling that this represents an important gap in the data. Therefore, it was decided that such a survey should be carried

out as part of the UK case study, and that, given the larger number of organic producers in England; a sample survey would be carried out rather than attempt to cover all producers, as is done in Scotland and Wales.

What additional data were collected?

The data collected in the English organic producer survey included:

- General farm information:
    - Address and organisation with which they are certified organic;
    - Total land area and high level breakdown (e.g. area of grassland, arable area, horticultural area);
    - Numbers of livestock (head) within high level categories (e.g. breeding beef cows, beef heifers, growing beef, laying hens, other poultry);
    - Agriculturally related activities such as processing, direct selling, tourism.
- Future intentions:
    - Whether remaining organic;
    - Whether retiring from farming.
- Production levels:
    - Numbers of head of livestock sold;
    - Amount of milk and eggs sold;
    - Tonnage of crops sold.
- Prices for some commodities (milk, eggs, arable crops).
- Opinion on organic prices and whether they are high enough to continue in organic production.
- Production intentions within the next 2 years (plans to increase, decrease or remain at similar levels).
- Direct sales.
- Exports outside the EU.

The questionnaire asked about livestock (beef, sheep, pig, broiler, milk, eggs) and crop (arable and horticultural) production.

How data have been collected?

A questionnaire was developed based on the Welsh and Scottish surveys (whose authors kindly provided copies of their data collection questionnaires). The questionnaire was most closely based on the Welsh survey, and used the same Excel spreadsheet format.

A draft questionnaire was developed early in the summer of 2013. It was then e-mailed to a number of stakeholders for comment over the summer period. These included Defra's statistics department, Defra's organic department, Organic Arable, Saxon Agriculture, Organic Farmers and Growers, the Soil

Association, Simon Moakes (Aberystwyth University) and Caroline Mohamed Shahin (SRUC). Based on their comments, the questionnaire was updated; most notably Defra's organic department requested that the section on extra-EU export be added. The final version of the questionnaire was completed in early autumn 2013.

Contact lists for organic producers were requested in October from Defra and separately from the four CBs that cover England (Soil Association, Organic Farmers and Growers, Organic Food Federation and Biodynamic Association). It was discovered, as a result of these requests, that data protection legislation greatly restricts the ability of these organisations to assist in this kind of study. Defra were able to provide only names and addresses of processors and producers (not distinguishing between these two categories and not providing the telephone numbers) as this is all that is allowed under their contractual obligations with the EU. After some discussion, the Soil Association and OF&G were able to provide details which included enterprise type and telephone number, as well as names and addresses, and could separate out English producers from their databases. The BDA, however, had a more restrictive agreement with its producers and so was unable to supply contact details, although the organisation was eager to help and was willing to ask for volunteers. Unfortunately the voluntary route would have led to self-selection bias in the sample and so the BDA's assistance could not be used in this case. The BDA has subsequently changed its licence agreements so that it will be able to help with such studies in the future.

There are approximately 2,700 organic producers in England, of whom approximately 2,000 were listed in the contact details from the Soil Association and OF&G. Of these, 1,000 were selected for an initial approach about the survey (by letter) and 223 were covered by the telephone survey, giving a final sample of just over 8% of the total population of English organic producers.

What costs have been incurred (direct costs and time input)?

As this was the first attempt to carry out such a survey in England, it is likely to have been more time-consuming than subsequent surveys would be.

For instance, a large amount of time was spent negotiating and discussing with various organisations about access to contacts lists. Due to data protection restrictions, it was difficult for organisations to provide these lists. In the future, such requests should be made earlier. However, at least one of the CBs has subsequently changed its licence agreement to make it easier to respond positively to such requests in the future. Consideration should be given to carrying out the survey online, such that the CBs can contact their licensees and ask them to participate if they wish. However, this would lead to self-selection bias and online surveys are known to have lower response rates than face-to-face and telephone surveys, so the advantages and disadvantages of this approach would have to be weighed carefully.

Setting up the questionnaire took approximately a fortnight (approximately 75 hours). The survey questionnaire spreadsheet was based largely on the Welsh survey spreadsheet, and Simon Moakes of Aberystwyth University provided a great deal of help and advice in adapting it for the English survey and setting up a data extraction spreadsheet to collate the final data from the questionnaires.

An initial letter was sent to a sample of 1,000 producers to forewarn them that they would be telephoned and asked to take part in the survey. The mailing took 20 person hours and cost £425.88 (paper, envelopes and postage but not including costs of staff time).

As ORC staff members were already fully committed due to a large number of research projects and bids, it was decided to hire casual staff to carry out the producer surveys. They were hired at a rate of £17.50 per hour. They took a total of 300 hours from mid-November to the end of December, giving a total cost of £5,180, with additional telephone expenses totalling approximately £300. One member of ORC staff was responsible for collating survey responses, reviewing and correcting spreadsheets where needed, answering survey team queries (as some members of the survey team had no previous agricultural experience, some of the terminology that was used by the producers needed explaining initially) and carrying out running statistics to check coverage of the survey. Their time amounted to 130 hours. The final analysis and reporting of the data took an additional three weeks (approximately 120 hours).

Thus in total, the survey took approximately 4 person months to complete.

Have stakeholder expectations been met?

Relevance

There has been a feeling that the lack of an English producer survey was a gap in UK data. The data that can be collected in such a survey is a useful check against the CB data collated by Defra with regard to current production levels. However, such a survey can also collect additional data about, for example, the amounts of organic products that are being sold as conventional, farmers' intentions to increase/decrease production in the near future, and farmers' intentions with regards to continuing to farm organically in the long term. Such data highlight current issues in the organic market and also allow forecasting of future gaps or surpluses in supply that will impact on the organic market.

Accuracy

The original aim had been to carry out a survey of a stratified sample of 700 producers, based on farm types, and their proportion within the overall population of organic English producers giving a good level of representativeness. The stratification was made difficult because:

a) There is very little information on the proportion of farm types in the entire population, and the data which were found were four or five year old estimates.

b) The Soil Association and OF&G did provide enterprise data for each producer, but these were in a difficult format for this purpose, listing multiple enterprises in each cell along with additional information, for example "[organic]poultryeggs". It was therefore difficult to convert to a farm type in a systematic and rigorous manner. Furthermore, the enterprise data categories were not harmonised between the two organisations.

c) The individual interviews took longer than was anticipated, and the survey team also had a great deal of difficulty making initial contact with famers. Therefore fewer surveys were able to be covered in the time allotted.

Due to the second of these issues (b), an additional tab was added to the questionnaire spreadsheet that fed data collected within the spreadsheet into a Farm Business Survey (FBS) farm type calculator. This allowed an estimate of the farm type to be made. A running tally was then kept of the farm types covered in the surveyed sample as questionnaires were received back from the survey team. This allowed monitoring of farm types and comparison to the estimated population distribution of organic farm types within England.

Figure C 1 below shows the geographical distribution of the population of farms from which the sample was taken (the OF&G and Soil Association contact lists) and the mail-out sample (1000 farms). It can be seen from this that the mail-out sample had a very similar geographical distribution to the overall population.

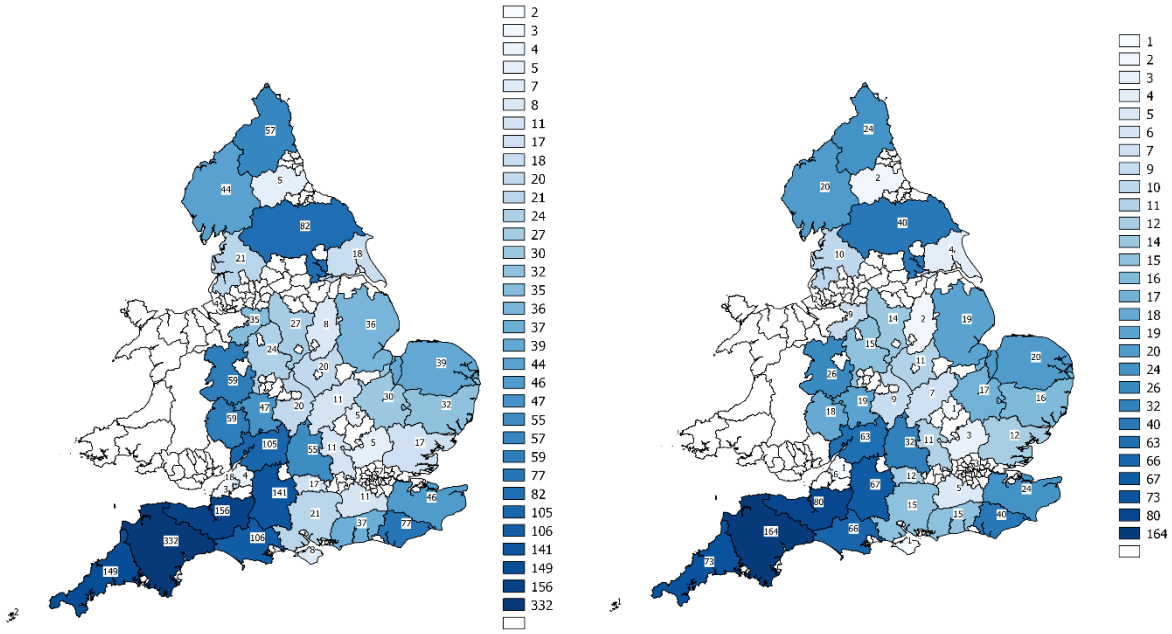


Figure C 1: Comparison between the geographical distribution of the entire population of the OF&G and Soil Association contact lists (left hand side) and the 1,000 farm sample which was used for the initial mail-out (right hand side)

It soon became clear that the target of 700 farms (approximately 25% of the population) had been ambitious. The target had been based on the Welsh survey, where 700 producers can be interviewed by 4-6 staff over 10 working days. However, it became obvious that the English producer survey was progressing more slowly. The initial aim had been to carry out the survey in the last fortnight of November. The survey was extended until the 18th of December, using the full survey team (7 people), followed by 3 members of the team continuing until the 31st of December. Despite this, the total amount of completed surveys was 223. The difference between the English and Welsh surveys may be due to Welsh producers being better prepared for the interview (having been surveyed annually for a number of years), and due to the Welsh survey team being more experienced. However, there may be other factors involved as well.

Given the small size of the final sample, the survey is not regarded as representative. This can be seen in Table C 1, which shows the distribution of farm types compared with the estimated distribution in 2008/09, and in Figure C 2, which shows the geographical distribution of the final sample. From these, it can be seen that the final sample over-represents beef and sheep farms, whereas it gives reduced coverage of cereal farms and farms in the east of England are under-represented.

Table C 1: Proportions of farm types represented in the England 2013 survey

Farm type	Number of responses	Proportion of responses	Proportions estimated for 2007-08 FBS
Cropping	32	14.35%	24.83%
Horticulture	31	13.90%	11.03%
Pigs and poultry	6	2.69%	4.14%
Dairy	39	17.49%	20.69%
Beef and sheep	84	37.67%	24.14%
Mixed	21	9.42%	15.17%
Other	10	4.48%	

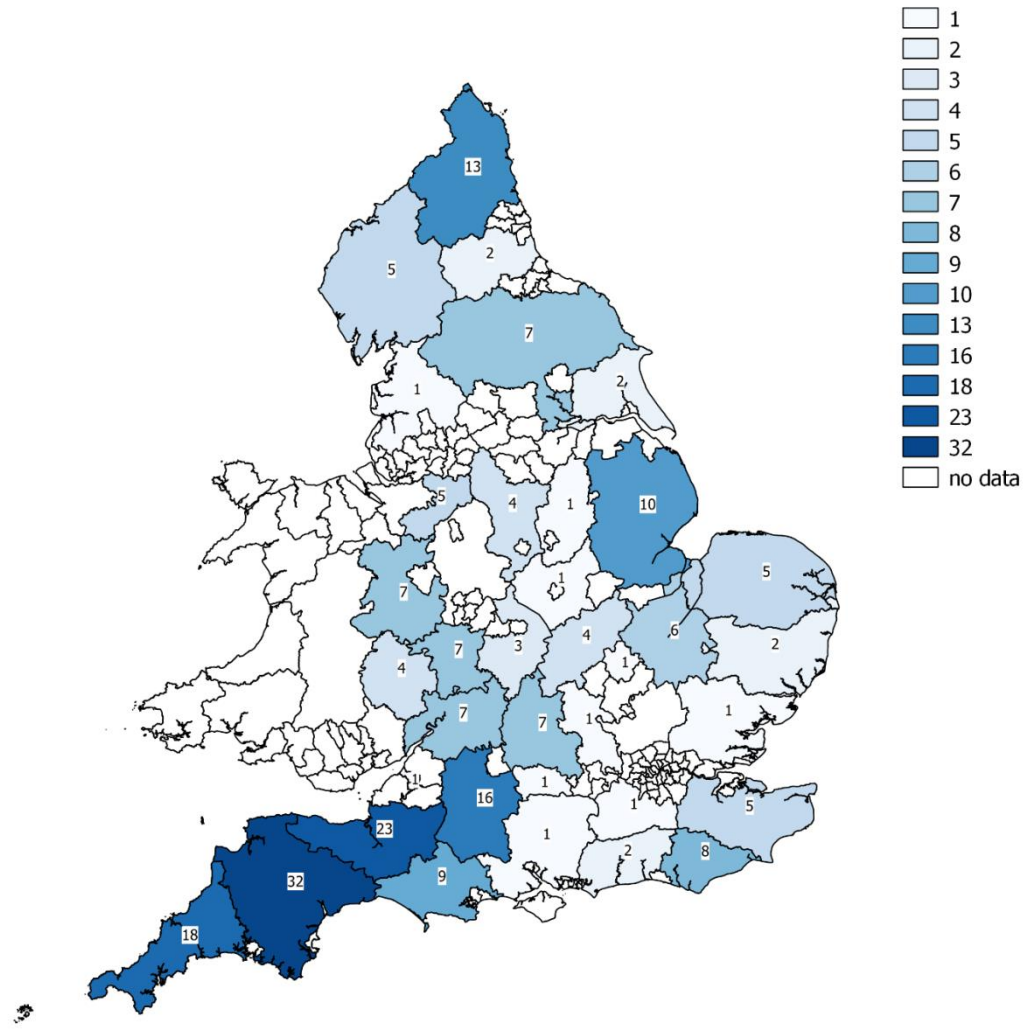


Figure C 2: The geographical distribution of the final sample of responses (223) to the England 2013 producer survey

The absolute numbers (e.g. livestock numbers, sales numbers) recorded in the survey were regarded with a degree of caution for a number of reasons:

1. Some farmers did not want to give numbers e.g. of livestock sold, as they regarded these data as commercially sensitive.
2. Some farmers estimated the figures as they did not have access to exact figures at the time of the interview.
3. Some members of the survey team mistook boxes that should have been used to record numbers for tick boxes (e.g. only recording a farm as having dairy cows rather than giving the number of dairy cows).
4. One member of the survey team who was himself a farmer raised a concern that some numbers that he was given by producers did not have internal consistency e.g. numbers of young-stock not agreeing with numbers of breeding animals.

As a result of these potential issues, the analysis of the data focused on the relative values and the tick box responses.

Timeliness

The original aim had been to complete the survey by the end of November and the analysis by the end of December or early January. It was decided to keep the survey open until the end of December to increase the sample size (see section above), which then delayed the data analysis. However, the analysis was completed by the 24th January, a minimal delay, and publication occurred as planned (a small selection of data were published in the Soil Association's Organic Market Report in March 2014, and the full analysis was made available in a PDF report on ORC's webpage in June 2014).

Comparability

One of the reasons for working very closely with Simon Moakes and Caroline Mohamed Shahin, the authors of the Welsh and Scottish surveys, was to ensure that similar questions are asked across all three surveys, thus allowing for comparisons between England, Scotland and Wales. Funding is being sought to support future annual producer surveys in England based on this pilot. If such funding is provided, the use of a similar spreadsheet questionnaire in future years would allow comparison in time as well as with Scottish and Welsh results.

What data quality checks have been implemented?

A variety of basic checks were implemented within the questionnaire e.g. if "other" was ticked but nothing was entered in the "specify" box then a cell would give a warning message; if both the acres and hectares columns were filled in for a specific crop or land use then a warning message would require the user to enter data in only one of the columns; a warning message would show if total animals sold was not equal to the sum of the organic and non-organic sales, the farmer was asked to estimate their farm type, to be compared with a calculation sheet that would also estimate farm type based on the standard output methods used for the Farm Business Survey.

Additional checks were carried out upon completion of the questionnaires, including:

- Using the percentage of producers covered by the survey to extrapolate crop areas and livestock numbers for comparison with previous records (e.g. Defra organic statistics publication from June 2013).

- Using GIS software to compare the geographical distribution of the total population from the OF&G and Soil Association contact lists with the geographical distribution of the completed surveys to assess whether the final sample had a similar geographical breakdown. (Figures B 1 and B 2)
- Comparison of the proportion of farm types covered with that expected in the overall population of English organic farms. (Table C 1)

These checks confirmed that the dataset is not representative.

The dataset was therefore used to gauge the attitude of 8% of English organic producers with regards to remaining in organic production, the current price premium (or lack thereof) for their various products, and whether they planned to increase or decrease production in the near future. These are all useful data which had not previously been recorded for English producers. It is hoped that if such a survey is carried out again in the future, it may be possible to increase the sample size. One approach might be to hire the Welsh FBS team (who carry out the Welsh survey). However, this is likely to be more costly than the approach that was used in this pilot year.

Supply balance equation for milk

As part of the UK case study, the use of a supply balance equation (Hamm *et al.*, 2002) for one organic product, milk, was tested to carry out data checking. The supply balance equation in its simplest form is:

domestic consumption = domestic production – exports + imports

For organic products, this may be complicated because of some organic production being sold as conventional.

The supply balance equation provides a data check, as it will only balance if all four sets of data (production, consumption, import and export) are accurate.

However, in this case, the attempt to collect the necessary data was unsuccessful.

What additional data were collected?

Data on domestic sales (value) have previously been collected by the Soil Association as part of the retail data obtained for its market report.

Additional data, which it was endeavoured to collect to enable the use of the supply balance equation, were data on (sources who supplied the data are given in brackets):

- Domestic organic milk production (OMSCo)
- Organic milk imports (OMSCo or Arla)
- Organic milk exports (OMSCo or Arla)
- Domestic organic milk sales by volume (Nielsen).

How data have been collected?

Two of the main organisations involved in the organic milk supply chain in the UK were contacted and asked whether they could provide data on organic milk production in UK, on exports from UK, and imports into UK. The organisations were:

OMSCo – The organic milk suppliers co-operative. With over 500 members, OMSCo is the largest and longest established organic milk supplier in the UK, with a milk pool of 340 million litres per year and two thirds of the UK's output.

Arla – A global dairy company and a co-operative owned by dairy farmers. They have production facilities in 12 countries and have the UK dairy industry's largest milk pool, comprising 3,200 farmers, spread geographically throughout the country.

Arla did not respond to the data request at all. OMSCo initially responded to request further information about the data that were required and then failed to respond despite being contacted twice more.

Other potential sources of data – DairyCo (the milk levy board) and RPA (the rural payments agency, who are responsible for monitoring milk quotas) – were investigated but the data they provide via their websites (which in DairyCo's case included a supply balance equation) did not include organic-specific data.

What costs have been incurred (direct costs and time input)?

Approximately one person day was spent in total in contacting organisations and checking websites for available information.

Have stakeholder expectations been met?

As no data were collected, stakeholder expectations were not met in this case. No supply balance equation could be calculated. This is an important check on data, so the lack of data on imports and exports in the UK (even for an important product like milk) undermines the quality-checking of production and consumption figures.

What data quality checks have been implemented?

The supply balance equation acts as a data check as it will only balance if all four sets of data are accurate.

In general in the UK, there are no data on organic imports and exports, and this was the problem in this case.

Use of a different market research company to provide retail sales data

In 2013, the Soil Association made the decision to move from using Kantar Worldpanel (household panel) data to using Nielsen (electronic point of sale – EPOS) data for its report on the 2013 organic market, published in March 2014. Kantar Worldpanel data are based on home-scanned products, so it was felt that the Soil Association's market calculations could be missing perhaps 20-25% of sales because "on the go" purchases such as snacks and lunches might be missed, and because panel members might be less inclined to manually record purchases of products that lack a scannable barcode. Additionally, some of the businesses who work with the Soil Association were also asking that the data source be improved by using EPOS data. The EPOS data covers sales through the multiples and a number of larger independent chains such as Spar, and in addition to this, the Soil Association carries out in house surveys of its top 100 licensees by turnover and of a selection of licensed independent traders, so would cover non-multiple sales through these. Additionally Nielsen also uses a household panel to increase the accuracy of its data.

What additional data were collected?

The Nielsen data will give a greater breakdown of sales values e.g. previously the Soil Association was only able to give subtotals such as "produce" (which will now be split into "fruit", "vegetables" and "salads") and "dairy" (which will now be split into "yoghurts", "milk", "cheese", "butter" and other smaller categories).

Also, the Nielsen data will include conventional comparators as well as the organic sales values, so that it will be possible to show the organic and non-organic share of the market by value for the product groups and the penetration of organic within those categories.

However, two aspects of the data will be lost as a result of the changeover. These are an estimate of each supermarket's share of the organic market, and percentage figures showing growth or contraction for each of these retailers – both previously provided by Kantar. This will not be continued with the Nielsen data as, although Nielsen can provide it, it was found to be too costly.

How data have been collected

As was mentioned above, the Nielsen data come from EPOS (supplemented by a household panel), whereas the previously used Kantar Worldpanel data were based on household panels only. It is hoped that the use of EPOS data will improve accuracy, as there will no longer be a reliance on panel members remembering/bothering to scan all purchases when they get home. This should ensure a more accurate picture where purchases of goods, such as snacks and lunches, are concerned. There is, however, a risk that if a product is not correctly recorded as organic by the retailer (either because it is incorrectly identified as being organic or isn't recorded as organic when it should be) then this could still lead to some errors and missed sales.

What costs have been incurred (direct costs and time input)?

The Soil Association has set up an annual contract with Nielsen in order to receive a monthly data check on the value of the organic market and its categories, comparing the 52 week, 12 week and the 4 week position to the previous year. On a monthly basis, this information is summarised for key stakeholders in tabular format and with commentary.

In preparation for the 2014 report, the data had to be sense-checked and cross-checked against information that came directly from some of the multiple retailers, to ensure accuracy. It also had to be combined with the separate information coming from the independent sector of the market, in order to get overall market totals. This amounted to approximately 3 days' work.

Have stakeholder expectations been met?

Relevance

As stated above with regard to additional data collection, the Nielsen data will provide a higher level of detail than has previously been the case. This should provide the vast majority of users with more relevant information. Some multiple retailers have missed having more data about the relative market performance of their rivals, but the switch to Nielsen – with the improved category detail and accuracy that it provides – has made the data available more relevant to most stakeholders in the organic industry.

Accuracy

In the limited testing the Soil Association was able to carry out before purchasing the data (described in the section below on data quality checks), the new approach appeared to increase accuracy. Previously, one of the multiple retailers and many of the organic brands, which are particularly reliant on the lunch and snacks trade, had expressed some dissatisfaction with the use of panel data, as they felt that it underestimated their organic sales. Some milk companies had also felt that the market was previously undervalued. The move to EPOS data should therefore be well perceived.

Timeliness

The move to EPOS data from panel data has had no impact on the timing of the publication of the Organic Market Report, which was published a week earlier in 2014 than in 2013 – in the second week of March.

Comparability

On a year-on-year basis, there may be a slight difference between the data up to 2013 and the data from 2013 onwards, as the previous reports were partly based on household panel data. However, the Soil Association has carried out its own surveys and will continue to do so. It partly uses these to calculate market figures alongside the data that it purchases from market research companies. In fact, the market report in 2014, published on the 12th of March, is based on five main data sources:

- In house surveys by the Soil Association (SA):
    - All licensed independents, (32 responses).
    - Top 100 licensees by turnover (30% response rate).
- Survey of 3,000 independent retailers carried out by Natural & Organic Products magazine, in conjunction with the Soil Association, with a response of 40 retailers.
- Survey of the multiples by an independent consultant (good participation, only one major multiple failed to submit a response in 2014).
- Data from Nielsen (previously from Kantar).
- CSD (certified sales data) returns from SA certification (e.g. used to get numbers for the health and beauty, and textiles data categories).

Since the authors of the Organic Market Report carry out their own surveys, including one involving the multiple retailers, survey findings and purchased market data are used for sense checking against each other to ensure that the impact of limitations in any single source of data is minimised and that market trends are appraised in a balanced way. Thus the use of EPOS data rather than panel data for this purpose should not have a major effect on year-on-year comparability.

The greater level of detail in the categories may improve comparability. This is because aggregated categories often do not concur, as they may include different sub-groups in different countries. A higher level of detail may remove some of these inconsistencies.

What data quality checks have been implemented?

The Soil Association had carried out some testing of the Nielsen data before deciding to use it. The data suggest that for 2012, the organic market through multiples was £1.1bn, which is in good agreement

with the figure calculated by the Soil Association in its Organic Market Report for that year of £1.161bn. Similarly for organic milk, OMSCo (the Organic Milk Suppliers Co-operative) estimated annual milk sales to be £150m, Kantar data gave an estimate of £113m and Nielsen an estimate of £140m. This suggests that the Nielsen data gives more accurate estimates.

The Soil Association is in regular contact with the largest processing businesses in the UK, meaning that it has been able to sense check the size of markets through sharing data with some of these businesses. For example, the milk figure has been discussed with OMSCo, the chocolate confectionery figure with Green & Blacks, as they are the major chocolate brand, and the cheese figure with Lye Cross cheese. The Association's Organic Market Report also includes sector overview reports from leading producers such as Aquascot (fish), Three Sisters (poultry), Stonegate (eggs) and Meadow Quality (beef and lamb). These reports, and contact with those who write them, help with interpreting some of the Nielsen data.

Getting better data on sales through non multiple sales channels

The Soil Association's Organic Market Report has good coverage of organic sales trends among the multiple retailers (supermarkets) through a long-established survey. This survey was completed in 2014 by the four largest retailers in the UK organic market (Sainsbury's, Tesco, Waitrose and Ocado) and two other smaller multiples (Marks and Spencer and the Co-operative). The Soil Association supplements these data using information obtained through surveys of its top 100 licensees by turnover and all its independent retail licensees. The survey of the top 100 is consistently completed by over 25% of the businesses targeted, while the survey of independents usually produces between 20 and 30 responses. In the survey of independents, the Soil Association asks about whether they make sales through farmers' markets, box schemes, farm shops, high street shops, and catering (both on-site catering and supplying other catering outlets). The coverage of box scheme sales and high-street shops has been consistently good, partly because leading box scheme operators and retailers with large shares of the market are among those who complete the top 100 survey, supplementing the data from smaller retailers through the independent retail survey. However, for farmers' markets, farm shops, and catering, responses have been quite minimal. Four steps were taken to obtain more information about organic sales through these channels:

- More detail was requested in the top 100 survey to help identify which respondents were supplying the catering sector, what percentage of their organic turnover this represented, and whether and to what extent catering sales were rising or falling,
- The two main surveys were distributed at an earlier date, and those targeted were more vigorously pursued for timely completion, with a view to increasing response rates and therefore securing more data,
- FARMA, the representative umbrella body for farmers' markets and farm shops, was approached to work with the Soil Association on a joint survey targeting FARMA members, in order to secure more data related to these outlets,
- An additional survey of independent retailers was carried out in partnership with Natural and Organic Products magazine.

What additional data were collected?

Changes to established surveys

Additional detail on catering sales requested in both the independent retail survey and the top 100 survey enabled the Soil Association to account for the organic turnover of 22 companies involved in the

catering market (based on 8 small independents and 14 companies from the top 100). Using the catering-only percentage of turnover from top 100 respondents, and the entire turnover of the eight small companies, for whom catering sales were not disaggregated, the combined organic turnover of these companies was £16.3 million. This represents over 90% of the organic catering market on the basis of previous sales estimates, a figure that has enabled the Soil Association to establish either that its data coverage of catering sales is much better than it expected or (more likely) that the catering market is significantly undervalued.

Earlier distribution and vigorous chasing

The Soil Association distributed its surveys by e-mail in early December 2013, earlier than in previous years. The surveys were more vigorously marketed, and prospective respondents more energetically pursued for completion, than in previous years. As a result the number of independent retail survey respondents was 32 – a 30% increase on the previous year. The number of top 100 respondents was 30 – a 25% increase.

Survey of farm shops/farmers' markets

In September 2013, the primary author of the Organic Market Report met with representatives of Lloyds Europa – the company contracted by the Farm Retail and Markets Association (FARMA) to do its event management and marketing – to explore potential partnership in data gathering. It was subsequently agreed that two online surveys would be developed by the Soil Association for distribution by the end of October 2012, and completion/collation by the end of January 2013. Distribution in October or November 2012 was seen as ideal to avoid the busy retail period ahead of Christmas, with follow-ups by telephone in the new year if survey returns were disappointing. It was agreed that the Soil Association would develop the online surveys, and these would be adjusted and distributed by Lloyds Europa to its databases of farm retailers and farmers' market traders. Questions would solicit information of particular interest to FARMA, in addition to questions related directly to organic sales. Lloyds Europa estimates that there are 750 farmers' markets in the UK, and 200 of these are FARMA members. The estimate for numbers of farm shops is 4,000, around 400 of which are FARMA members. The targets envisaged for the surveys were to distribute to all FARMA contacts with a view to getting at least 50 returns from each survey. Unfortunately it was not possible to develop the survey before Christmas because of reduced capacity. The survey was developed in January 2014 and amended by Lloyds Europa, but Lloyds Europa was unable to distribute the survey in time for inclusion in the Organic Market Report, due to other projects. It is hoped that the survey will be distributed and completed in the summer 2014, with the results published online, alongside the online Organic Market Report. When distributed, the survey will provide useful insights into the organic turnover of farmers' markets and farm shops, and beyond:

- Regional distribution,
- Market stalls and shops per individual business enterprise,
- Turnover split between product categories – produce, dairy, meat, non-food etc.,
- Percentage of turnover from organic products,
- Sales performance 2013 – rate of growth or decline,
- Impact of the horsemeat controversy on sales,
- Relative importance of various product differentiators to customers: fresh, locally sourced, free range, organic, Fairtrade.

Additional survey of independent retailers

In conjunction with the Soil Association, a survey was carried out by the main UK organic magazine, Natural & Organic Products, and sent directly to a selection of 3,000 of its readers.

The objective of this survey was to supplement the information which the Soil Association gathered in its own independent retailer survey, and to capture data from businesses whose focus was 'health foods' alongside organic foods. The response rate to the survey, within the short timescale allowed, was approximately 40 respondents.

The data has been extremely useful in understanding the proportion of organic sales within the retailers overall sales, the key categories for independent retailers, the outlook for future sales and the most important organic brands in independent shops.

It is planned that this survey will be done regularly for the annual Organic Market Report in the future.

How data have been collected?

Survey of farm shops and farmers' markets

The Soil Association approached Lloyds Europa, marketing business arm of FARMA (National Farm Retail and Markets Association) about the possibility of carrying out a joint survey of FARMA members. Data have not yet been collected because the survey has not been distributed and promoted yet – more details above. Once the survey has been completed, data will be collated and analysed by Lloyds Europa staff, subcontracted by the Soil Association.

Survey of independent retailers

The Soil Association approached the main UK organic trade magazine, Natural and Organic Products, which sent out a survey to its readers. Natural and Organic Products collated the survey results into tables and pie charts for the Soil Association to analyse trends for the Organic Market Report.

What costs have been incurred (direct and indirect)?

Surveys of farm shops and farmers' markets

So far these two surveys have used 20 person hours, spent on a 90-minute initial meeting in Winchester involving four people, travel time, and three of those four individuals developing and reviewing the draft survey and finalising its design on surveymonkey (an online survey provider). Including telemarketing, data collation, data analysis and publication online, the total estimated cost is 150 person hours.

Survey of independent retailers

The primary author of the Organic Market Report spent 15 hours collating and analysing the data to identify overall figures and trends.

Have stakeholder expectations been met?

Relevance

Improving survey returns and securing additional market data related to wholefood shops, farmers' markets and farm shops is highly relevant to organic businesses, as this information has been sorely lacking in the past. So far, it has only improved survey returns on existing deliveries and some modest data on wholefood shops added to the previous data collection, but the surveys of farmers' markets and

farm shops points to significant additional data. To our knowledge, there has been no detailed survey of the organic turnover of farmers' markets and farm shops in the UK since 2009.

Accuracy

All four new steps taken to obtain more information about organic sales through non-multiple sales channels improve the accuracy of market valuation through a richer set of data. This has been particularly useful in catering sales. It is expected that the most useful data of all for improving the accuracy of market data will emerge from surveys of farmers' markets and farm shops when these are completed.

Timeliness

Three out of the four elements of additional research covered by this section of this document were conducted in good time for inclusion in the Organic Market Report 2014, published on 12 March. The farmers' markets and farm shops survey has yet to be completed, making it too late for inclusion in the Organic Market Report but still useful for a long overdue update on trends and market performance by the summer of 2014.

What data quality checks have been implemented?

Survey of farm shops and farmers' markets

These two surveys have yet to be completed, but once the data have been collated, data quality will be checked through a check on the calculations and analysis that is external to Lloyds Europa.

Survey of independent retailers

The Natural and Organic Products survey was not designed to provide concrete organic turnover data, but rather to collect qualitative information to help ensure a better informed analysis of the independent retail sector. The data assembled by Natural and Organic Products were reviewed and checked by both the Soil Association and the primary author of the Organic Market Report before the findings were presented.

What improvements were made to data collection methods for certain types of data?

The UK case study mainly concentrated on collecting additional data that had not previously been collected, rather than improving current data collection.

The new collected data include:

- The producers' survey collected data on:
    - Farmer intentions with regards to future production levels and remaining organic,
    - Proportion of produce sold as conventional,
    - Direct sales.
- Harmonisation of CB data (area and livestock numbers) has improved timeliness of Defra's publication of the organic statistics for the UK.
- A survey of independent retailers was carried out through the magazine Natural and Organic Products.
- A survey has been initiated regarding organic sales through farm shops and farmers' markets, although this has yet to be completed.

- The data derived from established Soil Association surveys on catering sales, direct marketing and independent retailers were improved by requiring more detailed information from respondents, and by pursuing survey returns more vigorously.
- The move from household panel data to EPOS data has improved accuracy of data regarding retail sales through multiples.

Are the methods for data collection transferable to other countries?

Production:

The use of a producer survey to obtain data in addition to that collected by CBs would be possible in many countries. The type of data found to be useful in this case were: the percentage of organic produce being sold as conventional, producers' feelings about the level of premium they were receiving, and future intentions –with regards to remaining in organic production in general, but also more specifically to production levels.

These questions are useful in identifying issues in the market, where large proportions of goods are being sold as conventional although produced organically, or where prices are deemed insufficient to support organic production. They are also useful in predicting future possible surpluses or gaps in supply.

Possible issues lie in obtaining contact details for organic farms, as the CBs may be unable to provide these to third parties due to data protection legislation, and in reaching a sufficient response rate to give good coverage of the organic production of the country.

Retail:

The use of household panel data or EPOS data is possible in many countries as the market research companies that provide such data are usually global companies. However, such data are only available at a cost, and the organic coverage may be small in some cases.

Trade media partnerships are worth exploring to access data from retailers selling organic products but not included within the relatively narrow band of retailers that have organic certification.

Broader representative trade bodies are also worth approaching with a view to collaboration. They may attach a low level of priority to organic sector research, but can be persuaded into partnership if joint surveys cover areas of greater interest to them than organic sales.

Other useful information to come out of the case study experience

The question of commercial sensitivity and data protection is of great importance when improving data collection. It is necessary to ensure that producers, retailers and others trust the organisations or individuals to whom they are providing data and that data collectors and publishers are able to sufficiently aggregate data to retain confidentiality. Market transparency allows stakeholders to make more informed decisions but should not happen at the cost of individual businesses' competitive advantage.

It may be possible for other countries to link with key publications to send out surveys to independents as the UK has done with Natural & Organic Products magazine.

With the Soil Association working collaboratively with a broader range of organisations than previously, its Organic Market Report has gained understanding and analysis from the expertise and insights of these new collaborators.

Although the survey of farmers' markets and farm shops that was developed has yet to be distributed, contact between the Soil Association and FARMA has enabled the inclusion of additional insights into the Organic Market Report, based on FARMA's experience. This includes the horsemeat controversy creating a rebound in organic sales through farm shops, but farmers' markets failing to benefit to the same extent because of significantly reduced footfall following as a result of cold, wet spring weather.

Recommendations to improve data quality in the future (In the country/region and in other countries)

By employing an independent consultant who is prepared to sign non-disclosure agreements with the supermarkets, the Soil Association is able to get a better picture of multiple retail sales than it would if these retailers were required to report directly to the association. In 2014, the involvement of the Organic Research Centre in the Organic Market Report ensured wider participation and cooperation from CBs in some areas of research (such as the producer survey) than would have been possible if those CBs had been approached by the Soil Association as a 'rival' CB.

A major issue for UK organic data is the lack of import/export data. This makes it difficult, if not impossible, to carry out sophisticated data checks such as supply balance equations. It also means that predicting the impact of changes in production on the retail market is complicated as estimates need to be made of the amount of that production likely to leave the UK and/or whether a sudden drop in UK production will create a deficit in the retail market or whether it will be covered by imports.

Suggestions for a code of practice on organic market data collection

1. Have a clear and detailed description of data collection and analysis methods – this does not necessarily have to be published in full in reports, but should be available on request to fully communicate the data collection methods and their potential limitations. In particular:
    a. such a description should make clear where expert estimates have been used (and whether an approach such as the Delphi method has been used or whether the estimate methodology is less rigorous),
    b. the sample size and proportion of the overall population should be given for survey/panel data, along with methods used to ensure representativeness (and an estimate of their success),
    c. It should include a description of the data checks carried out (e.g. comparison with prior year data and investigation of unusual year-on-year movements, comparison with the overall food retail market movements within the country and investigation of unusual differences, use of supply balance equations).
2. Carry out data cross-checks. Even simple checks like comparison of year-on-year trends and comparison with similar data from neighbouring countries can highlight potential errors or anomalies, which may be due to differences in the market. Ideally, the use of additional sources of data for comparative purposes would be advisable. In organic agriculture, this situation is rare as there often is limited or no data so the luxury of being able to compare similar datasets is not available. However, it should be attempted where possible. For example, in some countries, the organic components of FADN data may be useful to compare with data from CBs.

3. In some cases, the use of a trusted third party to collate and analyse data may allow greater access to data viewed as commercially sensitive. The Soil Association has found this to be the case with the multiple retailers in the UK, some of whom are prepared to disclose more data to a trusted third party armed with a non-disclosure agreement. The involvement of the Organic Research Centre as a collaborator and honest broker in 2014 has also helped to secure producer participation from a wider pool, including licensees of Organic Farmers & Growers, in addition to the Soil Association licensees. Data collected independently can be published in aggregated and/or anonymous format so that useful information is not lost due to commercial sensitivity, and greater transparency of the organic market as a whole doesn't disrupt the commercial advantage of organic companies.
4. Consider adding a clause to CB licence agreements to allow data collected to be used (in aggregated and anonymous format) in research into production, retail and international trade where appropriate.

Germany (by Diana Schaack[27])

German case study objectives

AMI (Agricultural Market Information), with some support from the University of Kassel, worked on the following issues:

- Improve the **annual market estimate** by panel institutions and scientists:
    - At the beginning of 2014, AMI organised the organic market estimate through the "Arbeitskreis Biomarkt" task force for 2013 with several panel institutions and scientists. However, there were still uncertainties, especially for all non-multiple channels.
    - Within the taskforce, the overall opinion was that improvement of data collection is needed to obtain greater **coverage** of sales through non-multiple channels (bakeries, butchers, box schemes, farmers' markets, farm shops) – AMI is attempting to source project funds from the federal scheme for organic farming for further investigation.
- The team at the University of Kassel controlled and **cross-checked** the different types of data in the Annual Market Report and provided very valuable suggestions for improving this report – several changes have been applied as a result of this work.
- Comparison of **producer price** data with other European countries:
    - AMI has collected producer prices in Germany for nearly all organic products since the 1990s. In other European countries, price data collection systems started later but data collection systems should now be compared.
    - For Europe-wide traders, information on different price developments and levels in different countries can be very useful – that is why AMI plans to start a European wide producer price comparison with prices from Germany, Italy, France, the UK, the Netherlands, and Denmark. Data collection started in the middle of 2013.
    - Together with the Università Politecnica delle Marche, Italian price data collection from the two stock exchanges in Milano and Bologna, and also from ISMEA, was compared with the German data collection system.
- Calculating a **supply balance equation** for carrots and milk:
    - Calculating a supply balance for some organic products in Germany remains very difficult because much of the required data is missing. This not only includes export data but also data on volumes of catering sales and market deficits.
    - That is why AMI has chosen two comparatively simple products with nearly no export (carrots) and a comparatively transparent market with a limited number of actors.
    - Supply balances have been calculated using production volumes (statistical data), sales volumes (GfK), imports (AMI project data), estimates of harvest and market losses, and catering sales.

[27] Agrarmarkt Informations Gesellschaft (AMI), Germany

Annual market estimate

The German organic market is estimated annually by the "Arbeitskreis Bio-Markt" task force that is coordinated by AMI. The task force consists of the following organisations and institutions: AMI; the BÖLW - the German umbrella association for the organic sector; the panel institutions GfK, Nielsen scan track, BioVista and Klaus Braun; and the Universities of Kassel and Weihenstephan-Triesdorf. This task force has been working together since 2010 (for estimate of 2009 data) on a regular and voluntary basis.

There is no market data source that reflects the whole market. That is why a piecemeal approach has been developed in 2009 and 2010 for estimating the German organic market. GfK household panel data are taken for fresh products and dairy in the supermarkets and for all products in "other sectors", such as bakeries, butchers, box schemes, farmer´s markets and farm shops. Additionally, Nielsen scan track (EPOS) data are used for organic packed items in the supermarkets. BioVista trade panel data and Klaus Braun trade panel data are used for estimating the size of the organic shops.

There are three issues with that estimate:

1. Up until now, all panel institutions have provided their data for free to the other members of the task force. This has become a problem for some of the members of the taskforce because they usually earn money by selling their data.
2. Communication between the organisations and panel institutions, who are competitors within the market, was not always easy.
    a. It was decided at the beginning of the task force in 2010, and onwards, to keep the results confidential within the task force until BioFach, when the results should be published. Huge media interest in having data before BioFach made this difficult. In 2013, as in 2011, this did not work, and major data leaked out, to the frustration of taskforce members.
    b. Usually, AMI collects data from the panel institutions, collates them into an Excel spreadsheet, and makes suggestions that are taken as a basis for discussion. In both 2012 and 2013 some panel institution data were delayed and came too close to the appointed date for the telephone conference. Thus in both years the telephone conferences had to be postponed to another date when not all of the members could take part. This also did not improve communication between the members of the task force.
3. The different panels have different coverage rates. Retail panel data such as Nielsen scan track, BioVista, and Klaus Braun data can be taken to be nearly 100% of the investigated shops. The only issue with the retail panel data is the correct assignment of the EAN codes to organic or non-organic products, which always has to be controlled. Household panel data, such as GfK, never cover 100% of the market because households tend to forget purchases, especially small purchases, such as those made at farmers' markets, on the way to work, or while travelling. Additionally, household panel data does not show catering and restaurant sales. Bien and Michels (2007) determined a coverage rate for GfK household panel data of 66%. From the beginning of 2013, the GfK have changed their weighting system to adapt it to international standards and make it more comparable to other European panels, such as Kantar. Since then, the coverage rate of GfK data has definitively been higher, but is still unknown for the different sales channels. Therefore, the introduction of the new weighting system made the market estimate more difficult. For butchers, bakeries, farmer´s markets, farm shops and box schemes, the GfK household panel data shows too much variation and it is not clear how much of the

market is covered. To give an example: assuming different coverage rates but using the same raw data (GfK, Nielsen, BioVista, Klaus Braun), the range of the 2012 estimate was between 6.92 billion EUR and 7.63 billion EUR. Finally, the task force decided that the market had a size of 7.04 billion EUR to the best of its knowledge.

The organic proportion of the market is calculated according to annual food consumption data from the Federal Statistical Office.

Throughout the year, AMI regularly analyses and cross-checks GfK household panel data for fresh products. AMI pays for monthly GfK raw data for organic and conventional meat, meat products, poultry, eggs, cheese, fruit, vegetables, potatoes, bread, vegetable oils, milk, and milk products. This is part of an AMI-GfK contract. AMI buys data but also cross-checks them according to promotions in the multiple chains and also with the development of the product markets.

During the OrganicDataNetwork project, AMI worked on three issues:

1. Financing the market estimate: AMI convinced the ministry of agriculture to make the organic market estimate part of the 3-year AMI-ministry contract for data delivery (mainly producer price data). With this budget, AMI can pay the panel institutions at least an expense allowance in exchange for providing their data for the market estimate.
2. In January/February 2014, for the first time in 3 years, information was kept confidential within the group and has not leaked out to the press before BioFach.[28] This can be seen as a success. However, the change of dates, which meant that not everybody was able to take part in the telephone conference led to disaffection. AMI wants to use the remaining time of the OrganicDataNetwork project to improve communication within the group. In the autumn of 2014, once AMI knows the result of the project application (see 3 below), it will be useful to have a meeting or telephone conference to talk without time pressure and in more detail about the methods of the market estimate and its publication. In the past, estimates of the German market were always conducted in a very short time – mostly only in a few days. This means that there is usually no time for detailed discussion on methods. As a result, the previous years' results had to be revised several times.
3. AMI is now writing a proposal for a research project within the Federal Scheme for Organic Africulture and other forms of Sustainable Agriculture (BOELN) to determine the coverage gap for GfK household panel data for several products and sales channels. AMI has already talked with BLE (Federal Office for Agriculture and Food) who were not reluctant to consider the proposal, but they will have to wait for final budget decisions, following the elections. The project proposal shall contain the following:
    a. Determining the coverage of GfK-household panel data for several products and sales channels for estimating the whole market of these products and sales channels,
    b. Development of an annual survey of butchers, bakeries, farmers' markets and farm shops to estimate the sizes of these markets and cross-check them with GfK household panel data,
    c. The project is supposed to run for 2 years, and AMI has estimated a budget of around 120,000 EUR.

[28] There is an agreement among many actors of the organic sector that the latest data on organic agriculture in Germany are presented to the public at the BioFach organic trade fair in February but not before.

Cross-checks in the annual market report

AMI publishes the "Markt Bilanz Ökolandbau" annually, in a series with seven other yearbooks covering all agricultural markets. It contains about 30 pages of market analyses, with several charts, and 180 pages with data tables covering the following topics:

1. Sales values and sales volumes of several organic fresh products and sales channels in Germany (mainly according to GfK household panel data),
2. Organic farming and production in Germany,
3. Producer prices for fruit, vegetables, potatoes, cereals, protein crops, meat, milk and eggs as monthly and annual time series for Germany,
4. Consumer prices for several products and sales channels in Germany,
5. Organic market, farming and production in Europe.

The book, together with an electronic version, is published in March each year and is sold in the AMI web shop[29] for 206 EUR and 303 EUR respectively.

Because it contains so much information using several types of data and is compiled every year to a very tight timescale, "Markt Bilanz Ökolandbau" contained inconsistencies. Therefore, Professor Ulrich Hamm and Corinna Feldmann of the University of Kassel have carried out in-depth checks and cross-checks of the analyses and data tables, and made suggestions for changes to the data from the 2013 publication, which AMI has used in the 2014 publication. Additionally, they have checked the 2014 publication on a tight timescale before its publication.

Suggested changes mainly included making designations more consistent, adding more accurate headlines, and adding explanatory notes under the tables. In the market charts, in the first part of the publication, there were also some inconsistent headlines and explanations. Additionally, the University of Kassel team found two larger mistakes in the calculations in two tables.

Finally, it can be said that the cross-checking of the report by an expert outside the publishing organisation can only be good for the quality of any report. It polished the market report and greatly improved quality.

Producer Prices

Since the middle of the 1990s, the ZMP had collected data on organic prices at farm level on a weekly or monthly basis (depending on product), and this has been done by AMI since 2009. Prices are collected via Excel forms and individual price lists sent by the traders, or by telephone interviews. They are all collected in a database and weighted with the size of their enterprise (either by hectares or by sales volumes). The prices for animals for slaughter are weighted by the number of sold animals. Panellists also get a monthly internal evaluation of the number of slaughtered animals per month. The AMI animal for slaughter panel represents about 70% of the organic pigs in Germany and 25% of the organic cattle. For cereals and milk, the panel coverage is also reasonable at about 40-50% for cereals and 90% for milk. The surveyed potatoes packers and producers represent 80% of the potatoes market. The coverage for fruit and vegetables is much lower as the market actors are mostly much smaller. But to show market development, the AMI producer price panel is a good instrument. For eggs, AMI and MEG (Market Info for Eggs and Poultry) built up a producer price panel in 2010. Nearly 60% of the organic egg market in

[29] Information on the AMI Marktbilanz can be found at www.ami-informiert.de/ami-shop/ami-shop-startseite/produkte/markt-bilanz

Germany is concentrated in two big companies that mainly deliver to the discounters under contract prices, but they are not willing to take part in such a panel. That is why the organic egg panel only covers about 10% of the market and shows higher prices than those big companies would pay.

To give European traders an overview of price development in different countries, AMI started to compare European prices for several organic products in the middle of 2013. Difficulties when comparing prices arise with the different parities, the inclusion or exclusion of VAT, different publishing dates and frequencies, and also different product definitions regarding packaging, washing and sorting. Therefore AMI gives an overview of the different organic producer price collections, and gives conclusions about their comparability.

AMI has chosen all organic producer price data collections of which they are aware. These are:

- RNM (Réseau des Nouvelles des Marchés) in France for fruit, vegetables and potatoes,
- the magazine "La Depeche – Le petit meunier" in France for cereals and oil seed,
- the Soil Association in the UK for fruit, vegetables, cereals, meat and eggs,
- ISMEA in Italy for fruit, vegetables, cereals, meat, and eggs,
- Stock Exchange Milano in Italy for cereals and oilseed,
- Stock Exchange Bologna in Italy for cereals and oilseed,
- Stock Exchange Emmeloord in the Netherlands for onions and carrots,
- Friland in Denmark for meat prices,
- AMI in Germany for all named products.

AMI organic producer price collection is described above and in the German section of Appendix 2.

The **RNM** (Réseau des Nouvelles des Marchés) in France collects prices for more than 500 products and has reported producer prices for all agricultural products since 1953 with a focus on fruit and vegetables. For organic fruit and vegetables, they started to collect prices approximately 5 years ago and have attached their data collection system directly to the conventional data collection. Data is available at a cost in a password protected area on the web page. They publish organic price data for the two central markets in Nantes and Rungis, including consumer prices, wholesale prices, export prices of French fruit and vegetables, and import prices for imported fruit and vegetables. Data is collected weekly in all French regions, in the producers markets that play an outstanding role in the French trade with fruit and vegetables, and can be seen as the indicator for market development.

Data can be found here: www.rnm.franceagrimer.fr/cgi-bin/cgiindex?/cgi-bin/cgimar%7C3FLISTMAR%7C3AFLG:/cgi-bin/cgimar%7C3FSAINOMMAR:les_prix_par_march%E9

The magazine "**La dépêche**" (www.depeche.fr) is the most important magazine and web page for the French grain and oil seeds sector. It publishes weekly prices for all crop products. For more than 10 years, they have also published wholesale prices of organic cereals, protein crops, and oil seeds delivered to trader or processor. Prices do not include VAT, and a minimum of 25 tonnes are traded. This is the same price level as in AMI price data collection. To obtain farm-gate prices from the prices they quote, La dépêche suggests subtracting 45 EUR/t for transport and stocking.

The **Soil Association** – a CB in the UK – collects monthly to quarterly producer prices for fruit and vegetables, eggs, dairy, meat, and cereals. The frequency depends on the product. Price collection for fruit and vegetables, for eggs, and for dairy doesn't only include wholesale prices but also farm shop

prices and retail prices. The Soil Association surveys key producers, traders, feed mills, and slaughterhouses, and uses a webpage called mysupermarket.co.uk where retail prices are compared. In contrast to the German and French data collection, the Soil Association collects farm-gate prices where transport and possible stocking and sorting costs still have to be added. Data is available for free on the Soil Association web page: www.soilassociation.org/farmersgrowers/market/marketdata

ISMEA (Istituto di servizi per il mercato agricolo alimentare), the service institute for food and agricultural markets, is an Italian governmental institution that has collected data on conventional food prices for many years. The organic price data collection began in 2010. Organic price data collection for fruit and vegetables is part of the conventional price data collection by ISMEA. They also have data on a wide range of organic consumer prices. More details can be found here:

www.ismeaservizi.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/1876#MenuV

and with graphs and time series here:

www.ismeaservizi.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/2769#MenuV.

The cereals, meat, eggs, and milk prices are collected by AIAB, the Italian Association for Organic Agriculture, but are published on the ISMEA web page. All organic wholesale prices are collected at different producers' organisations and market places in the country. Prices from these different places are not mixed up but are published individually. Like in Germany and France, prices quoted contain transport costs. Prices do not contain VAT.

The **stock exchanges** in **Milano** (borsa.granariamilano.org) and **Bologna** (www.agerborsamerci.it/listino/listino) have listed organic cereals and oilseeds weekly for many years. Prices exclude VAT but are regional prices for Bologna or Milano. The stock exchange prices are generally lower than all other price data collection in other countries because they do not include transport and they always use spot market prices. Therefore, they show market developments but their level is not comparable to the other prices.

The **stock exchange** in **Emmeloord** (www.landbouwbeurs.com/?page=transactiemelden) in the Netherlands has been a specialists' stock exchange for vegetables and potatoes for many years. They have listed organic onions and carrots weekly since the business year 2008/09. A commission of farmers and traders weekly decides about the next week´s price. Prices are listed for raw but not sorted and washed vegetables. This is why prices are lower than German, French, Italian or British prices, but they show the evolution of the spot market very well.

Friland is the main meat processor and main slaughterhouse for pigs and beef in Denmark. It has about 80% of the Danish organic meat market and therefore its price can be seen as "the" Danish price. Friland is also a subsidiary company of Danish Crown, the biggest slaughterhouse in Denmark and one of the biggest in Europe. Organic meat prices always consist of the conventional Danish Crown price plus an organic supplement. Prices are comparable to German or Italian meat prices as they also do not contain VAT and include transport costs. Prices are listed in DKK/kg carcase weight and have to be converted into EUR. For more information: www.friland.dk/Landmand/Tillaeg.aspx

In summary, it can be said that all organic price data collections illustrate market evolution but they are not all directly comparable due to different trade levels and due to including and excluding transport and sorting costs.

Table C 2: Overview of producer price data collections:

Price collection system	Products	Level of processing or packaging	Transport costs	VAT
DE: AMI	All	Sorted and cleaned but not packed	Carriage free processor	excluded
UK: Soil Association	All	unknown	Farm-gate	excluded
FR: RNM	Fruit, vegetables, potatoes	RNM mostly follows prices at the retail and wholesale stage for non-processed fruits & Vegetables. Some processed/packed products are followed like cooked red beat, cherry tomatoes in 250g cans.	Carriage free processor	excluded in the main French wholesale markets (Rungis, Nantes...); Included in general supermarkets and specialized stores
FR: La Depeche	Cereals, protein crops, oil seeds	Loose, and cleaned	Carriage free processor	excluded
IT: ISMEA	All	both loose and packed. Depending on the products.	Carriage free processor	excluded
IT: Stock Exchanges Milano and Bologna	Cereals, protein crops	Loose, in bulk	Ex Milano respectively ex Bologna	excluded
NL: Stock Exchange Emmeloord	Onions, Carrots	Onions raw, Carrots packed in parings	Ex Northern Netherlands	excluded
DK: Friland	Pigs and Beef	Animal carcases	Ex Slaughterhouse	excluded

Source: AMI/OrganicDataNetwork compilation

There are two other producer price data collections in Europe that were not considered here for the following reasons:

The **BLW** (Federal Office for Agriculture) in Switzerland publishes monthly Swiss organic producer prices (See at: www.blw.admin.ch/dokumentation/00844/01044/01472/index.html?lang=de). As the Swiss market is developing very independently from the EU market, and reaches much higher prices than the rest of Europe, the prices are not really relevant for markets outside Switzerland. Nevertheless, this market report with consumer prices for all products and producer prices for meat, eggs, milk, and cereals gives a very good overview over the Swiss market.

Bio Austria publishes organic milk prices monthly in a password protected area on their web page www.bio-austria.at. Comparing milk prices between countries is especially difficult because of the different accounting approaches, with different kinds of back payments and different fat and protein bases. This is why organic milk has been excluded from this European price comparison. Finding comparable definitions and conversion factors for milk price comparisons could be the next step for this European price comparison.

Examples

This report shows a few examples of the producer price comparisons.

Potato prices in Germany, France, Italy and the UK differ greatly. It becomes clear that the price level in Italy is much lower than in the other countries. In all the countries, the price reported is that for loose potatoes but it is not clear whether they are sorted and/or washed. It can be assumed that in Italy ISMEA report prices for unwashed and unsorted potatoes.

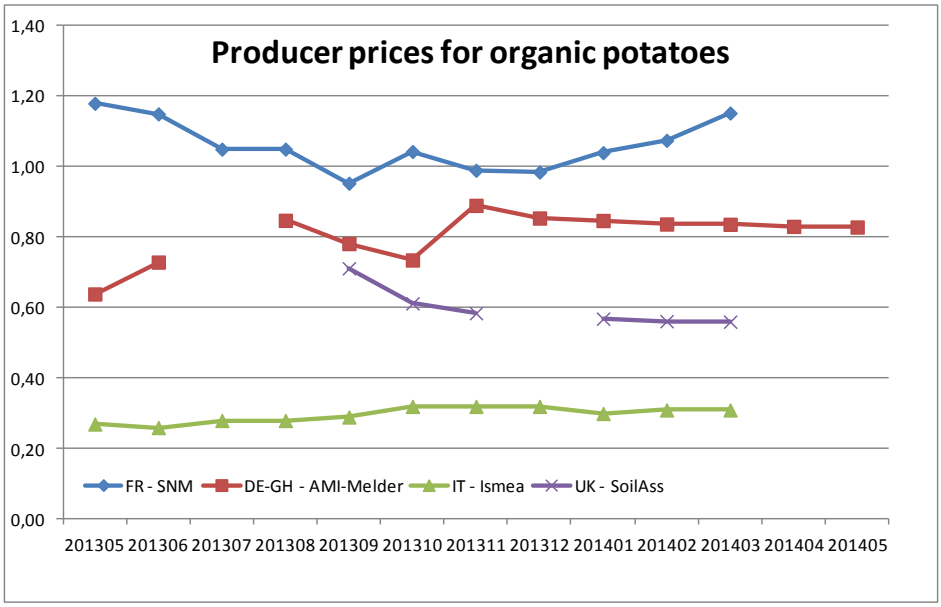


Figure C 3: Example of producer prices for potatoes in EUR/kg. Source: AMI

Apple prices differ a lot across Europe. It is typical that in countries where production volumes are high and the product is exported, prices are lower than in countries where the product has to be imported. France, Germany and the UK are apple importers. Italy is the main apple producer in Europe and reaches lower apple prices. It can also be assumed that ISMEA reports prices for unsorted apples. In countries that are net importers, producers often benefit from the willingness of consumers to pay more for regional products.

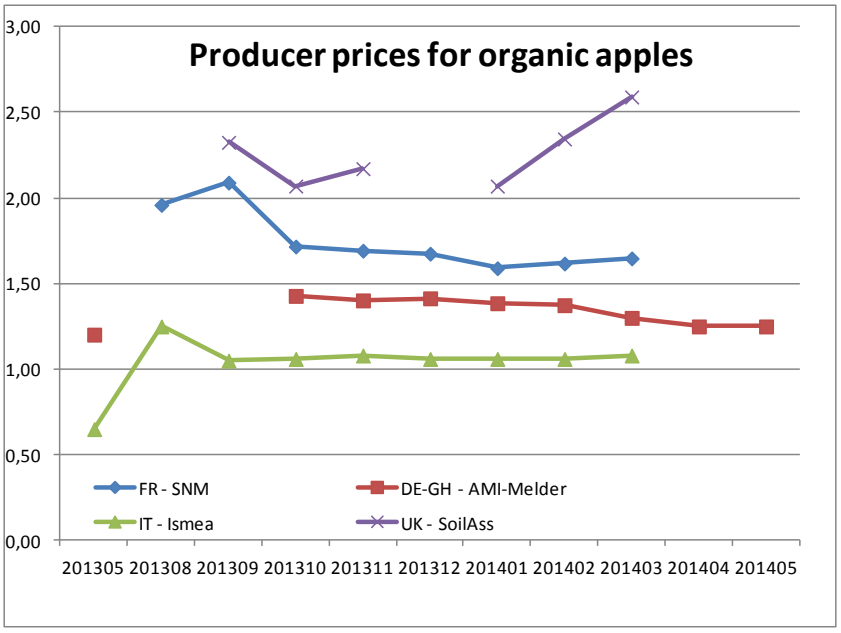


Figure C 4: Example of producer prices for apples in EUR/kg. Source: AMI

Wheat is produced and traded all over Europe. Germany and France have by far the highest cereal prices compared to other countries. The comparably low prices in the UK could be a result of the GBP to EUR conversion factor, and the fact that the Soil Association collects farm-gate prices and not delivered processor prices. However, the latter should only make a difference of 30 to 40 EUR/t including average transport costs. The Italian wheat prices are much lower due to the fact that data are spot market prices at the stock exchanges and do not contain any transport, cleaning, or sorting costs.

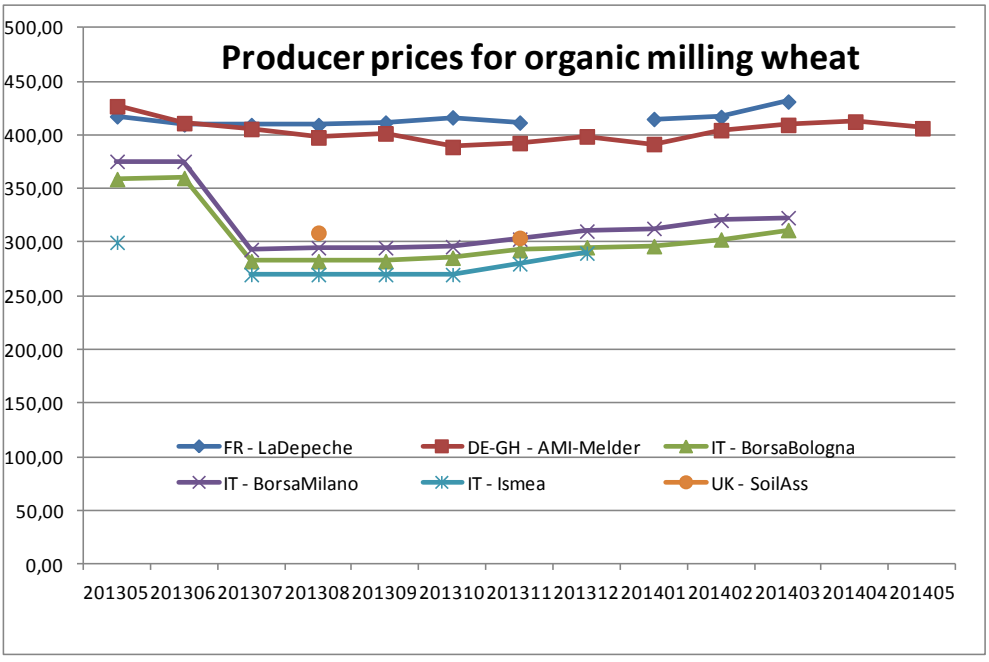


Figure C 5: Example of producer prices for organic milling wheat in EUR/t. Source: AMI

Young bull prices are about the same in Italy and Denmark and a little higher in Germany and the UK. The British are more typically beef eaters than the Germans and Danish, thus they give more importance to the quality of meat.

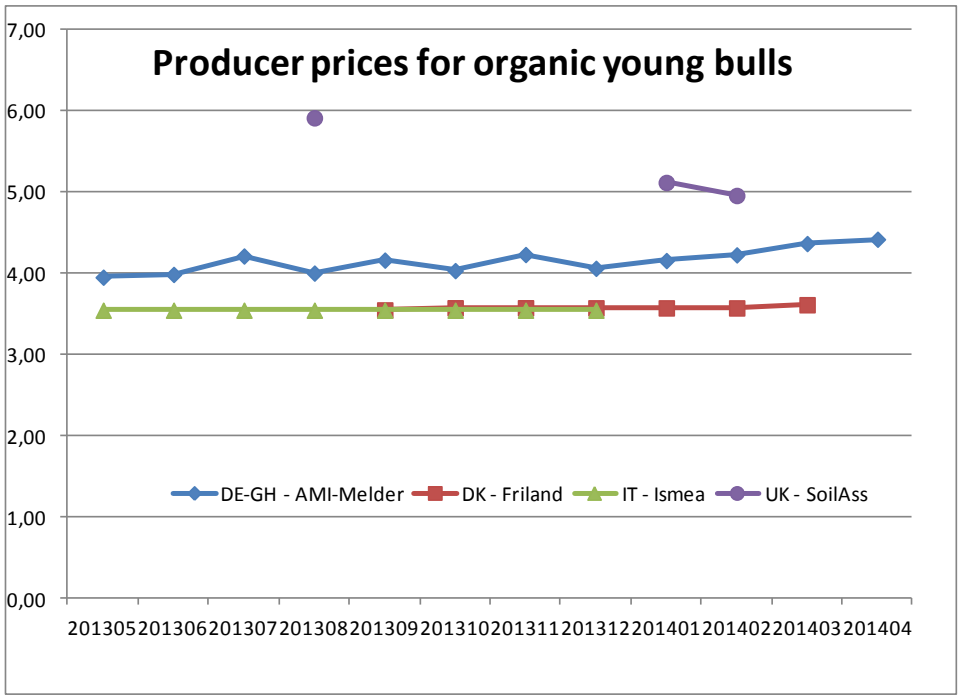


Figure C 6: Example of producer prices for organic young bulls in EUR/kg carcase weight. Source: AMI

What additional data were collected?

AMI collated the different producer prices from the six countries in a database attached to the main AMI price data collection (Bio4Data). All the different products were coded according to the product codes used in Bio4Data to make them comparable with each other.

How data have been collected?

Excel spreadsheets can easily be filled in by copy/paste from the original sources on a weekly basis and added to the database. The database not only recognises the different product names but can also automatically convert prices to EUR from other currencies. The daily currency conversion table from another AMI database is used. For analysing prices, a pivot table is used, showing either price developments for a certain product in different countries or for different products in one country.

What costs have been incurred (direct costs and time input)?

The database and conversion tables were developed within 4 days. Analysis tables and cross-checks took an additional day. Collecting price data took another two days. Once the system has been developed, data collection takes about half an hour every week.

Have stakeholder expectations been met?

Relevance

A European price comparison shows two main issues – the different price levels in the countries and also the different developments for the same product in different countries.

Accuracy

When comparing prices, the reader always has to consider the differences between the price data collection systems discussed above. Data publishers have to indicate the differences in an adequate way.

Timeliness

Data is updated weekly but published in an aggregated monthly form to make it more comparable. Most of the data is published in the same week or month and can be used by traders or producers. Some price reports, like the stock exchanges, are even valid for the following week, and thus give a forecast on the market.

Comparability

Comparability is the main challenge when collecting or collating producer prices. It is important to define parities, the inclusion or exclusion of VAT, product categories and also transport/packaging/washing/sorting. To obtain exact prices, it is always important to ask both sides – buyers and sellers - as both have an interest in influencing prices and could do so by giving over/under estimates. It is also important to always ask the same market actors for consistency. The most accurate way to weight prices is by also collecting data on the volumes sold. In most cases, this is impossible due to the unwillingness of the reporters to provide all the data. In Germany, this accurate form of weighting only works for animals for slaughter. Reporters, in exchange for providing their data, get information on the total number of slaughtered animals per month in a closed user group. Giving back information in closed user groups is always a good incentive for data providers.

Supply balance equation for milk and carrots

As part of the German case study, it was decided to investigate whether it is possible to use a supply balance equation (Hamm *et al.*, 2002) for two organic products, milk and carrots, to carry out data checking. The supply balance equation in its simplest form is:

Domestic consumption = domestic production – exports + imports

To make it more detailed and comparable with conventional supply balance equations, AMI decided to use a more exact equation, which would be:

Domestic consumption (households and catering sales) = domestic production – harvest and market losses – exports + imports

For organic products, this might be complicated because of some organic production being sold as conventional, and by the lack of data for some of the indicators.

The supply balance equation provides a data check, as it will only balance if all sets of data (production, consumption, import and export) are accurate.

However, the main data gaps are export data and the coverage rate for GfK household panel data that needs to be determined to calculate domestic consumption.

What additional data were collected?

Data on organic exports are not generally collected in Germany. Mainly processed products and few raw material or fresh unprocessed products are exported. That is why AMI has chosen two products where

there are very few exports. In the case of milk products, AMI has estimated exports together with two of the biggest dairies.

Domestic sales data are regularly collected by GfK in the household panel. These household purchases do not show catering sales and there is also no data on harvest and market losses. According to studies on the conventional market by Behr (2012), harvest losses for conventional vegetables are estimated to be 7-8% of the production. Harvest losses include vegetables which are not in market-compliant shapes or with quality problems due to weather conditions. Market losses mainly occur to vegetables that have been displayed in the shops too long and have to be disposed of. For conventional vegetables, they are estimated at around 11% and can be assumed to be even higher for organic vegetables due to lower turnover. For carrots, they can be assumed in the same range, as organic carrots are sold with quite high turnover. Additionally, there are catering sales that are not known and can only be estimated according to conventional data. In the conventional market, catering sales of vegetables have a share of 20% of the market, which can be assumed to be lower in the organic market because organic products by far don't have the same penetration as conventional products in the catering market.

How data have been collected?

For organic carrot production, there were official data from the Federal Statistical Office for 2012 and 2013:

www.destatis.de/DE/ZahlenFakten/Wirtschaftsbereiche/LandForstwirtschaftFischerei/ObstGemueseGartenbau/Tabellen/OekologischesGemuese2012.

For organic milk delivery, the Federal Office for Agriculture and Food BLE publishes monthly data on milk deliveries:

www.ble.de/DE/01_Markt/09_Marktbeobachtung/01_MilchUndMilcherzeugnisse/_functions/TabelleMonatlicheErgebnisse2014.html?nn=2304392.

For imports, AMI has conducted but not yet published a study on organic imports in Germany for the business years 2010/11 until 2012/13. Imports have been estimated using a mixture of different data:

- Foreign trade statistics data from the Federal Statistical Office for some single organic companies, which signed a letter of agreement for the use of their data in this study,
- Survey among importers and a few exporters in the supplying countries – about 60 companies were interviewed,
- GfK household panel data for fruit, vegetables, potatoes and eggs – for those products, the origin of products is identifiable in the shops, and households scan the origin of their purchases,
- Store check for organic dairy products to investigate dairy seals (with the code of the country of origin) on the packages,
- Production data analyses for the major products for the main supplying countries.

For carrots, AMI has quite a good overview on the production structure in Germany by being in regular contact with the main market actors, as part of their weekly market observation. Therefore, the consumption volume of carrots in the GfK-panel could be cross-checked with the production volume of these market actors. Exports only play a minor role for fresh carrots as more than 40% of the market volume is imported. However, exports in processed form such as juices and baby food cannot be covered here.

For milk and dairy products, a store check at several locations all over Germany has been conducted to investigate the dairy seals on the products. This data has been matched with regional GfK-household panel data and thus the sales volume of imported products (with foreign dairy seals) could be determined. This approach worked reasonably well for packed products but was almost impossible for cheese, where nearly 50% is sold as loose cheese. Therefore, AMI asked an expert on organic cheese trading (Klaus-Jürgen Holstein, Managing director of com.shop), who consults many cheese wholesalers, for his estimate. For export estimates, AMI contacted Klaus-Jürgen Holstein, Matthias Parusel, a consultant of the organic dairy industry, and Lothar Laufer, who represents Arla – one of the biggest dairies in Germany, and the biggest in Europe.

Results

Carrots

For carrots, AMI has taken the organic gross production of carrots according to data from the Federal Statistical Office (86,665 tonnes). A certain proportion of production is intended for the manufacture of processed food, such as baby foods, and therefore does not reach the fresh market. For the conventional market, AMI usually accounts harvest losses at about 10%. These carrots are not used for fresh carrots sales because they are too big, too small, or have unusual shapes. Often those carrots are used for processing (juice and baby food production) and also for fodder, but they do not reach the supermarket shelves. Harvest losses differ from year to year depending on actual harvest volumes and qualities. However, with losses at 10%, 78,000 tonnes still remain on the market.

From the survey of importers carried out in the second half of 2013, AMI has determined an import volume of 43,000 tonnes fresh carrots. Carrots mainly come from the Netherlands and from Israel during spring time (from March/April to June). There is nearly no export of organic fresh carrots from Germany. Therefore, 121,000 tonnes remain on the market. There are exports of processed carrots found in juices and baby food.

AMI estimates that catering uses about 5% of this volume – less than in the conventional market, where 20% of all vegetables are used for catering sales. Market losses (i.e. losses in supermarkets – volumes that are not sold) are estimated at 11%, which is comparable to market losses of conventional carrots. Therefore, 110,000 tonnes of carrots are sold to households as calculated under that scheme.

When analysing GfK household panel data, the result is very similar. With a correction factor of 1.25 (to account for missed sales within the panel data), household sales of organic carrots in Germany for 2012/13 reached 105,000 tonnes.

Equation model for organic carrots business year 2012/13 in Germany

in tonnes		calculated results
production (statistical office)	86.665	
harvest losses - 10 %	8.667	77.999
imports (from importers survey)	43.000	120.999
exports	0	120.999
catering sales - 5 %	6.050	114.949
market losses - 11 %	5.018	**109.931**
household consumption GfK with factor	**105.000**	

Source: AMI

This shows that the calculation with the model: [Domestic consumption (households and catering sales) = domestic production – harvest and market losses – exports + imports] worked reasonably and can be used when sufficient data are available. Some data that are derived from conventional studies, such as market losses and harvest losses, would better be investigated separately for the organic market. The unknown share of carrots for processing should also be investigated.

Milk

The equation model for milk worked differently because milk is processed into different products and not mainly used as liquid milk. If possible, there should be data from the dairies regarding their cheese, butter, cream and other milk products production. There is no such data in Germany as dairies only have to report their production in total to the Federal Office for Agriculture and Food, and don't need to differentiate between organic and conventional. There are about 50 dairies that produce organic milk products in Germany – of these, many produce organic and conventional products. The five biggest ones cover a little less than half of the market.

Because it is not possible to survey all the dairies, and the response rate would not be very high from what we know from earlier surveys, AMI has chosen another way of estimating milk usage in Germany.

For raw milk production, there is data from the Federal Office for Agriculture and Food, who publishes monthly data on organic raw milk deliveries from farmers to the dairies. It is important to consider that those milk deliveries only report German milk and no imported raw milk. It is known that some German dairies also process milk from Danish or Austrian farmers, but this volume is unknown. Raw milk deliveries from German farmers to German dairies in 2013 were 682,100 tonnes.

To obtain data on milk product consumption by German households, AMI used GfK household panel data multiplied with a factor for the coverage gap. For the different milk products, AMI used a conversion factor to calculate the required raw milk for those products. What was not considered here, and could be calculated in more exact extrapolation, is the fact that some milk is used twice, for example when fat from fat-reduced milk or from fat-reduced yoghurt is processed into butter. As AMI does not know the volume of this process, and as there are some products not reported by GfK to AMI, such as milk drinks (cacao, butter milk, kefir) and milk desserts (e.g. custards), this data gap could somewhat compensate for this issue. However, for the production of the milk products that are consumed by German households, AMI calculates a raw milk demand of 791,320 tonnes, which is 111,000 tonnes more than milk deliveries.

As AMI does not get much information from the dairies with regards to imports, AMI has conducted, in cooperation with the organic associations Bioland and Demeter, a nationwide store check in different supermarket chains within the import-project, under the Federal Organic Farming Scheme and other forms of Sustainable Agriculture. In the stores, dairy seals were checked for the different milk products and matched with regional GfK household panel data. Using that method, AMI identified the imports of butter, drinking milk, yoghurt and cheese, and calculated again the milk usage for the production of those products, which totalled 224,000 tonnes. Hence, together with the German milk deliveries, there were 856,100 tonnes of organic raw milk equivalent on the German market for household sales.

There is generally no data on organic exports from Germany but it is well-known that there are a number of organic milk products being exported from the country – e.g. drinking milk mainly to Italy and Eastern European countries, and milk powder, especially to China. These exports are expected to increase tremendously in the following years, not only from Germany but mainly from Denmark. Together with Arla Foods, one of the biggest milk exporters, AMI estimates exports of organic milk to be around 50,000 tonnes, with 856,000 tonnes remaining on the German market.

Assuming that catering sales were 4% of milk sales, and that market losses in the shops were (according to conventional market) 8%, there would be 822,000 tonnes of milk equivalents on the German market in 2013.

Equation model for organic milk in Germany				
in tonnes	**2012**	**2013**	**2012**	**2013**
	GfK data - sales volume with factor 1.25		therefore needed rawmilk	
production (federal agency for agriculture and food)			**671.000**	**682.100**
household sales volume (GfK)				
Drinking milk	209.214	221.664	209.214	221.664
Yoghurt	54.570	53.865	54.570	53.865
Butter	8.694	8.758	173.875	175.150
Cream Cheese	11.740	11.478	64.570	63.126
Cream	9.633	9.694	67.428	67.856
Cheese	22.559	21.090	227.735	209.659
milk usage households			**797.391**	**791.320**
imports (from store check matched with regional GfK data)			223.000	224.000
exports (estimation by AMI/Arla)			50.000	50.000
SUM production + imports - exports			**844.000**	**856.100**
catering sales + 4 %			31.896	31.653
market losses - 8 %			66.343	65.838
SUM production + imports - exports + catering - market losses			**809.553**	**821.915**
Source: AMI				

The equation for organic milk is more complicated than for a product which is not as processed, such as carrots. The main difficulty is the lack of export data and the calculation of milk usage according to GfK household panel data.

What costs have been incurred (direct costs and time input)?

Approximately two person days were spent, in addition to the work within the projects about organic imports, when most of the data was collected. Within that project, determining organic milk imports took at least 10 person days. For the organic carrot imports, it took 2 or 3 days for a survey and analysis.

Have stakeholder expectations been met?

Stakeholders never imagine that data collection could be that complicated. They also would like to have simple numbers and not data that vary depending on the circumstances. The big issue in calculating equation models is the coverage gap in the household panel for estimating the total sales volume of some products, the unknown volume of catering sales, and the lack of export data. As export data will still be lacking at least in the next couple of years, it will remain difficult to make supply balances, especially for products that are exported.

Italy (by Francesco Solfanelli, Daniela Vairo and Raffaele Zanoli[30])

Italy case study objectives

The UPM (Università Politecnica delle Marche) team has worked closely with MIPAAF (Ministry of Agriculture, Food and Forestry), SINAB (National Information System on Organic Farming), ISMEA (The institute for Study, Research and Information on Agriculture and the Agri-food Market) and AssoBio (National Association of Processors and Distributors of Organic and Natural Products) on the market report. The report comprises the following improvements:

- Integration and cross-checking of the various sources of data on imports. Import data was improved by cross checking the existing import datasets from MIPAAF and by implementing the method for cross-checking this Ministerial dataset and the customs data on imports. The initial objective was to cross check both MIPAAF datasets (self-declaration database and import authorisation database) and then cross check this new dataset with the Italian customs one. .
- Estimate of the volume and value of organic crops. This has required two main steps:
    - estimate of crop yields by cross-checking information from different sources: literature review, experts' assessments and previous national projects (such as the project on yield data carried out by SINAB).
    - use the data on producer prices from ISMEA, which is collected monthly. These data were harmonised and cross-checked with data coming from various Italian stock exchanges.
- Consistency check of organic retail value data. The retail value data from ISMESA was cross-checked with the scanner data from AssoBio.

Integrate and cross-check various sources of data on imports

The UPM team has worked closely with MIPAAF and SINAB in order to integrate and cross-check various sources of import data. The import data was improved by integrating the existing import datasets from MIPAAF with customs data on imports. The objective was to integrate the MIPAAF datasets (Self-declaration database; Import authorisation database) and the Italian customs dataset into one common database, which could then be checked for inconsistencies and subsequently used as a source of data for further analysis and for the country report.

What additional data were collected?

Import data for organic products is currently collected and published by SINAB on the basis of self-declarations issued by the operators. During the Italian case study, we developed a procedure to cross-check this dataset with the import authorisations one in order to identify potential inconsistencies. Also, a method for cross-checking the Ministerial dataset with data from Customs has been implemented.

How data has been collected?

The data has been collected according to the process represented in Figure C 7.

[30] Universita Politecnica delle Marche, Italy

The first step of the Italian case study on imports involved the aggregation and cross-checking of two Ministerial datasets: a dataset related to import authorisation (dataset 1) and a dataset related to self-declaration (dataset 2).

Dataset 1 contains information about all the organic operators that import organic products from third countries that are not under the equivalence regime. In this dataset, only potential volumes of each product to be imported are registered. This dataset is used for he consistency check of the data contained in the dataset 2.

Dataset 2 contains information about all the organic operators that import organic products from third countries (under both the equivalence and non-equivalence regimes). In this dataset, the exact volume of organic products imported under both equivalence and non-equivalence regimes are registered. This is possible since MIPAAF recently set up a Ministerial decree (Ministerial decree Nr. 18378 of 9 August 2012) which requires that all import operators of organic products from third countries must self-declare the exact volume of each product imported by March of each year.

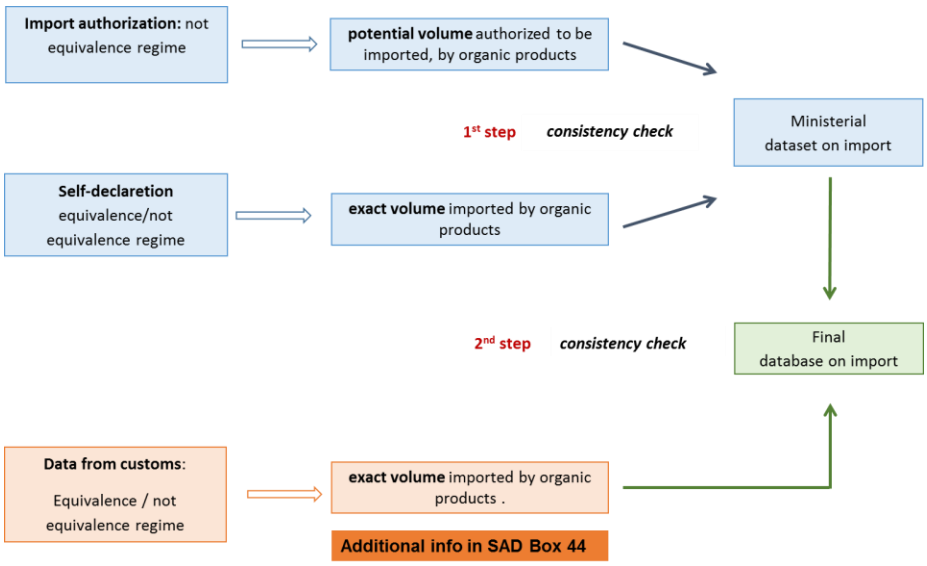


Figure C 7: Illustration of the data collection concept

Since the exact volume imported by the organic operators for the specific products should not exceed the potential volume authorised to be imported, a first consistency check has been implemented over the plausibility of dataset 2. The results show that the volume self-declared by the importers is always lower than the volume authorised by the Ministry.

In the second step, we implemented the method for cross-checking the Ministerial dataset (dataset 1 and dataset 2) and the customs dataset on imports (dataset 3). After an agreement between customs and the Ministry, the SAD (Single Administrative Document) box 44 (C644) is now completed with information on the organic status (1 = certificate for Organic Production; 0 = does not have any certificate). Therefore, this allowed us to compare the self-declarations/import authorisation dataset with the customs dataset (see Figure C 7). Currently, we have not yet merged the two datasets as

planned in the second step (see Figure C 7), since the dataset from the customs is still not complete (the customs dataset comprise only the volume imported from the 15th of june 2013).

What costs have been incurred (Direct costs and time input)?

No direct costs were involved. About 30 person-days have been required to set up the data collection and analysis methodology. It was particularly time-consuming to harmonise the Ministerial dataset according to the TARIC classification[31] used for customs data. However, this was necessary in order to compare the two datasets.

Have stakeholder expectations been met?

The resulting data and methods used in the case study were further discussed by the UPM team and the Ministry of Agriculture. The meeting was organised at the end of March to discuss and validate the methodology.

Relevance

The customs data on imports will provide a high level of accuracy. Moreover, it will provide a useful benchmark for the plausibly/consistency check of the Ministerial dataset on imports.

Having an accurate figure for the volume of products that are imported into Italy is interesting for market research, mainly addressed at the organic processors level, as well as for fraud prevention. Last, but not least, having correct data on imports allows the setting up of the global supply balance for some products. In fact, the supply balance equation provides a robust data check only if all four sets of data (production, consumption, import and export) are available and accurate.

The main limitation, however, is that data on import is not available for internal EU trade.

Accuracy

As discussed above, since customs data represents the exact volume of products imported into Italy from third countries (from both equivalence and non-equivalence regimes), their use should increase accuracy. According to SINAB, the current dataset on imports is quite accurate, however, in some cases, actual import figures could have been under/over-estimated. Therefore, the use of customs data should be perceived as an improvement by all stakeholders involved. This is true in both cases: 1) if the customs dataset is used as a whole (move to using the customs dataset for the report); 2) if the customs dataset (only a small sample) is used as a benchmark for consistency checking. The process discussed above is still under development, therefore there remains an uncertainty about validation issues and how accurate the final dataset will be.

Timeliness

Most of the work related to the dataset harmonisation and comparison was done from December 2013 to August 2014. Data checking and processing are time consuming, therefore, when the analysis needs to be performed before the summer, we recommend to bring forward the deadline for the import self-declaration by at least one month (by the end of February).

[31] ec.europa.eu/taxation_customs/customs/customs_duties/tariff_aspects/customs_tariff/index_en

Comparability

There is a good comparability with other import data as the same procedure is going to be implemented in other countries. For instance, we could use data on export from Mediterranean Organic Agriculture Network (MOAN) countries to cross-check against organic import data available in Italy.

What data quality checks have been implemented

The comparison between the Ministerial datasets and the customs dataset provides a data check in itself, as potential inconsistencies will be highlighted after cross-checking. The customs data are used to check consistency of the current dataset, and to ensure that no data were over or under estimated.

Estimating the volume and value of crops

What additional data were collected?

The aim was to estimate both volume and value of organic primary production in Italy, as these are not currently collected by the Italian competent authority. During the case study, estimates have been conducted with the help of ISMEA. The results will be included in the 2014 organic yearbook "BIO IN CIFRE 2014" (published before September 2014).

How data have been collected?

Organic production volume

Concerning production data, volume in tonnes of each crop was calculated according to the following equation:

(1) $Prod.\ Volume_i\ (t) = Area_i\ (ha) \times Crop\ yield_i\ (t/ha)$

Data regarding organic crop areas was provided by SINAB, who integrate the data coming from various control bodies (CBs) at regional level. SINAB is a public body that has the aim to collect, compare, and ensure compliance and reliability of statistics on the Italian organic sector. The data are collected by the CBs for the purpose of client administration and to provide various statistical data to the competent authority (CBs send the production data to SINAB by March of each year). The dataset encompasses 20 regions and 34 different types of crops, grouped into five land-use categories: cereals, industrial crops, vegetables, fruit, and olives/grapes. According to these data, in 2013 the total Italian organic land area amounted to 1,317,177 ha.

Organic crop yields were estimated using the Multiple Imputation (MI) method, by using information from literature review, expert surveys and statistical offices archives (ISTAT and INEA/RICA data set). The sources of data used for the dataset construction were:

1. Literature review and results from previous projects served as a basis for conducting the expert assessment (see point 2): experts were asked to assess crop yields on the basis of prior information. The most useful results were those obtained from the INTERBIO and ORSA project, both carried out by the IAMB of Bari (Italy)[32].

[32] 1) Le produzioni biologiche italiane: dinamiche interne e prospettive commerciali sui mercati esteri. Progetto Interbio. www.interbio.it/download,186,186,22,az11studio 2) Organic crop statistics Sampling survey (ORSA). Grant Agreement n° 10904.2009.002-2009.305. October 2010, Istituto Agronomico Mediterraneo di Bari Valenzano (BA) – ITALIA. Internal Publication.

2. Expert assessment. Due to the fact that the expert assessment is likely to be time consuming, regional experts, recruited from amongst producers, technicians, and researchers, were selected according to the importance of the region for the specific crop considered. The importance is computed according to the following "Crop Regional Index":

(2) $$CRI = \frac{UAA_{i\,r}}{UAA_i};$$

where i = crop; *r = region*; *UAA = organic utilized agricultural area* in 2012.[33] See Table C 3.

Table C 3: Example for the computation of Regional Crop Index.

Region	Crop		
	Durum weath	Soy	Olives
ABRUZZO	0.05	0.00	0.01
BASILICATA	0.15	-	0.02
CALABRIA	0.03	-	0.33
CAMPANIA	0.01	-	0.02
EMILIA ROMAGNA	0.02	0.27	0.00
FRIULI VENEZIA GIULIA	0.00	0.07	0.00
LAZIO	0.04	0.00	0.05
LIGURIA	0.00	-	0.00
LOMBARDIA	0.01	0.22	0.00
MARCHE	0.06	0.02	0.01
MOLISE	0.02	-	0.00
PIEMONTE	0.00	0.10	0.00
PP. AA.TRENTO e BOLZANO	0.00	-	0.00
PUGLIA	0.24	-	0.28
SARDEGNA	0.01	0.01	0.03
SICILIA	0.28	-	0.11
TOSCANA	0.06	0.00	0.07
UMBRIA	0.02	-	0.04
VALLE D'AOSTA	0.00	-	-
VENETO	0.00	0.31	0.00

3. Conventional crop yields. Data on conventional crop yields were determined by consulting the 2010 Italian agricultural census (ISTAT, 2010), which collected data on area (ha) and production (t) in a total of 20 regions. In Italy, ISTAT (The Italian National Institute of Statistics) is responsible for supplying up-to-date agricultural statistics. ISTAT carries out agricultural censuses to obtain data on agricultural production, crop areas, and yields. Conventional crop yield data were determined on the basis of the following equation:

(1) Crop yield = amount of harvested product (metric tonnes) / crop area (hectare)

Both amount of harvested crop and crop area for each crop and from each region were collected from the 2010 agricultural census data set.

Additionally some organic and conventional crop yields were also extracted from the RICA/AREA dataset (see http://www.rica.inea.it/public/it/area.php).

The final dataset consists of about 1,500 observations (crop yield estimates) for 34 crops and 20 regions. The dataset provides both conventional and organic crop yield estimates from three different sources (expert assessment, ISTAT census and RICA/AREA survey).

[33] For the computation of the index, we used data from 2012, as the information for 2013 was not yet available.

Organic production value

Production value was calculated by multiplying the production volume of each crop by the relative price.

$$\text{Prod. Value (euro)} = \sum_{i=1}^{n} \text{Prod. Volume}_i\ (t)\ \ \text{Price}_i\ (\text{euro/t}) \quad (3)$$

With regards to price, data on producer prices collected by ISMEA was cross-checked for potential inconsistencies with data from various Italian agricultural stock exchanges.

What costs have been incurred (direct costs and time input)?

No direct costs were involved. About 40 person-days (about 20 per team) were required to set up the data collection and analysis methodology. Since this was the first attempt to carry out volume and value estimates for Italian organic crop production, the data collection process was quite time consuming. In particular, a lot of time was spent collecting information regarding crop yield estimates from experts. Also, a large amount of time was spent negotiating and discussing with ISMEA and other Italian organic associations about access to contacts lists of experts. The survey questionnaire started in January 2014. An initial mail out was sent to the ISMEA experts to forewarn them that they would be telephoned and asked to take part in the crop yield expert assessment. Each institution involved in the survey (UPM, and ISMEA) delegated one person to collate the survey responses from the various regions. At the end of the survey, the spreadsheets needed reviewing and correcting. A statistical analysis was carried out to check for potential inconsistencies and to control the coverage of the survey.

Have stakeholder expectations been met?

The methodology adopted in this project for the volume and value estimates for organic crop production seems correct and responds to the demand addressed at the beginning of the research activity. The methodology could also be used in a broader sense for future analysis and could be extended to the estimate of livestock volumes and values.

Resulting data and methodologies used in the case study were further discussed by the UPM, ISMEA and other stakeholders involved in data collecting and publishing in Italy. The meeting was organised at the end of March to discuss and validate the methodology. The final dataset on crop yield estimate was discussed and validated during a skype meeting organised in July between the UPM and ISMEA.

Relevance

The general feeling is that the lack of organic volume and value data had left a gap in the Italian organic data: at present no information has been collected concerning the volumes and values of Italian organic production. The data collected in this case study is useful for the improvement of the Italian organic market report.

Accuracy

A small sample of data on volume has been extracted for consistency checking, with the help of CBs and other experts from the Italian organic market.

Timeliness

The original aim of the Italian case study on volumes and values had been to complete the survey by the end of March or early April. However, due to the fact that estimation of the organic crops area by the

Ministry had a short delay, we spent three more months before publisching the data (the 2014 analysis on crop volume has been finisched at the end of July 2014).

Comparability

In order to ensure that the data on volumes and values are consistent and comparable between countries and years; harmonisation of data classifications and approaches between institutes has been carried out. All data on crops follow the CPA Eurostat classification. The prices taken for the computation of the production values were also extracted from the ISMEA database on price (price at the origin).

What data quality checks have been implemented?

- Concerning yields, it was verified that none of the organic crop yield estimates exceeded the mean conventional crop yield.
- Concerning prices, data from ISMEA has been cross-checked with data coming from various Italian stock exchanges (Bologna stock exchange for grains and other commodities; the Agriculture and Food Centre of Bologna, CAAB, stock exchange for fruit and vegetables).

Use of different market research company to provide retail sales data

The market for organic products in large scale retail in Italy (supermarkets, hypermarkets, drugstores) is estimated by the ISMEA using GFK-Eurisko panel data. AssoBio (Associazione nazionale delle imprese di trasformazione e distribuzione di prodotti biologici e naturali) also provides an estimate of the value of non-specialized markets based on supermarket scanner data. We wanted to cross-check the different sources of organic retail data at supermarket level to identify potential sources of the inconsistency. Hence, for what concerns 2011 and 2012 supermarket trade data, GFK-Eurisko dataset (household panel) were cross-checked with data from AssoBio (scanner data extracted at the point of sale) – see Table C 4.

GfK – Eurisko panel

GfK is a market research company which conducts a consumer panel of households in Italy. The panel is based on weekly purchases from a sample of 8,000 households that represent the population of Italian households. According to ISMEA, the reference population - which is subject to annual updates - is now estimated at about 24 million families. The selection of sample households ensures coverage of demographic variables such as: geographic areas and household size. Purchase detection is based on the use of scanners, which can read barcodes of packaged products. GfK provides their households with a detailed code book for recording variable weight products (not-packaged and without EAN code). The purchase detection is carried out every two weeks, while the production and release of data to ISMEA occurs on a monthly basis.

AssoBio

AssoBio is the Italian association of processors and traders of organic products, it conducts research and provides market consultancy. In Italy, AssoBio uses Market-Track to collect retail scanning data. Information is collected from retail channels such as supermarkets and hypermarkets. AssoBio currently covers about 85% of the whole large scale market, since only shops using scanners are included in the survey.

What additional data was collected?

AssoBio gives a greater breakdown of sales values. While GFK-Eurisko were only able to give subtotals such as, “dairy products”, AssoBio can give more detailed information, such as “yogurt” and “cheese”. GfK-Eurisko coding for fresh food is much more detailed than the supermarket scanner data. For instance, AssoBio does not report data on the consumption of fresh meat, while for both fresh fruit and vegetables; GfK gives a greater breakdown of sales values.

How data has been collected?

The principal aim of the analysis was to measure differences between the two sets of retail sales data. Therefore, before the comparison between the two datasets could begin, it was necessary to find a common classification system.

Two classification systems were tested during the case study: the customs classification (TARIC) and the Eurostat classification (PRODCOM and CPA).[34]

As a result of the testing, it was decided to use the PRODCOM classification, but with some integration with CPA classification. PRODCOM does not have primary products, but only has the processed products, whereas CPA also includes primary products. In our case study we needed the PRODCOM for the details, and as PRODCOM seems to follow the same coding system as the CPA, it was not a problem to enter further information based on the PRODCOM (the PRODCOM classification code is closely linked to a single CPA code: the first 6 digits of the PRODCOM code are the corresponding CPA code). Figure C 8 gives an illustration of how the data has been collected and cross-checked.

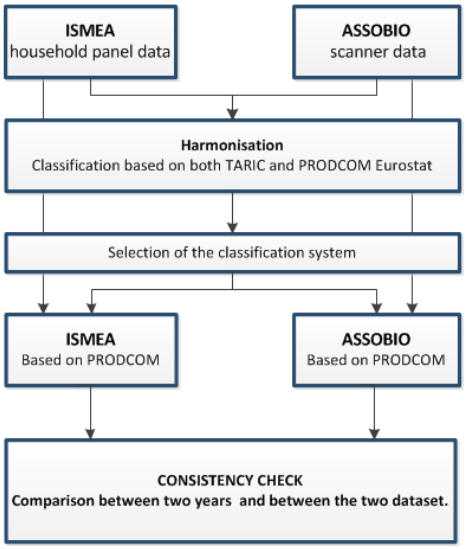


Figure C 8: Illustration of the process of data comparison

[34] For more details on classification systems see www.organicdatanetwork.net/1720.html#c10409.

What costs have been incurred (direct costs and time input)?

No direct costs were involved. About 15 person-days were required to set up the data collection and analysis methodology. Since this was the first attempt to carry out a comparison between two retail sales datasets, the data classification process has been quite time consuming.

Have stakeholder expectations been met?

Relevance

The ISMEA and AssoBio datasets are relevant for various market and policy stakeholders in the organic sector. The information has not been available to the public before: Italian trade data are not published in absolute value, but only as a differential from the previous year (market dynamics). This case study should give a reliable estimate of the turnover of organic products in supermarkets, since – according to AssoBio – about 80% of the supermarkets participate in providing these survey/scanner data.

Accuracy

The comparison between the ISMEA and the AssoBio datasets provides a data check in itself, as potential inconsistencies have been detected after cross-checking.

Timeliness

The data are collected monthly and the results will be published in September 2014.

Comparability

Harmonisation has been carried out for the comparison of the two datasets (household and scanner data). The nomenclature used in the case study follow the Eurostat PRODCOM/CPA classification.

What data quality checks have been implemented?

Two year sales data comparison (e.g. 2011-2012)

A check for extreme increases or decreases in values and obvious inconsistencies was undertaken. In order to make the comparison, we chose a dataset from the previous year for both sources (AssoBio and GFK-Eurisko). In 2012, on average, the Italian organic market grew by 8%. Changes of more than 35% should attract attention and data should be checked again for possible inconsistencies. However, depending on the type of product sold and on the market conditions, there might be a particular reason for the extreme development (increase or decrease). This particular condition has been analysed with the help of market experts from AssoBio and ISMEA.

Comparison between import and retail data

This check for inconsistencies is only applicable for those categories that are imported into Italy. Imports for a certain product should be smaller than sales for the same product. In some cases, where imports are higher than sales, there either must be a mistake in the respective data or there were significant exports at the same time. This could be checked by the help of a market expert.

Expert estimates

Expert estimates on country-specific organic data have been used to double-check data quality and consistency.

Supply balance equation for eggs

A Supply balance equation for eggs was attempted but has not yet been performed due to lack of data. According to Hamm *et al.* (2002), the supply balance is computed as follow:

(4) domestic consumption = domestic production – exports + imports

The above mentioned supply balance equation provides a robust data check only if all four sets of data (production, consumption, import and export) are accurate and comparable. For what concerns the Italian case study, it is important to stress the following issues:

- We do not have any information on export,
- Concerning imports, we only have information regarding imports from third countries, while we do not have any information from EU countries,
- A possible issue may arise with regards to estimating domestic consumption due to the fact that some organic production may be sold as conventional.

In the light of the above mentioned issues, we decided to investigate the supply balance for eggs. However, the supply balance has not been calculated as the necessary data are not available.

What additional data were collected?

Domestic consumption: data on domestic sales (value) have been collected by AssoBio as part of the retail data.

Domestic production and import were both estimated according to the task carried out within the Italian case study (see above for more details).

What costs have been incurred (direct costs and time input)?

No direct costs were involved. About 5 person-days have been used to set up the data collection and analysis methodology.

What data quality checks have been implemented?

The supply balance equation acts as a data check as it will only balance if all four sets of data are accurate.

Public data, and data from the OrganicDataNetwork database, were not available to cover all the variables in the equation. In general, in Italy, it is difficult to obtain data on organic imports and exports, therefore it was not possible to calculate the supply balance equation.

Estimate of the total organic retail market

At present in Italy there is no market data source that reflects the whole organic market. The value of the large retail (supermarkets, hypermarkets, drugstores) market for organic products is estimated by ISMEA using ISMEA/GFK-Eurisko panel data. However, these data are not published in the form of absolute values, but only as a differential from the previous year (market dynamics). AssoBio also provides an estimate of the large retail market, but in contrast with the ISMEA survey, this estimate is based on supermarket scanner data. There are very limited data on the specialised organic market: some information is available from AssoBio, which provides some estimates based on both expert opinion and data from some of the largest distribution companies in Italy. Bio Bank also provides some data on direct sales, public canteens and restaurants, however these data cover only the number of outlets and not the retail volumes and values.

The estimate of the total organic retail market in Italy is therefore very difficult at present. During the Italian case study, some issues were identified that should be taken into account when planning to estimate the total organic retail market in Italy.

- The two estimates of the value of the large retail market for organic products (ISMEA and AssoBio data) give substantially different values. According to data from the ISMEA/GfK–Eurisko household panel, in 2012 the value of domestic sales of organic products through large scale retail was about 330 Million Euros. For the same year and for the same sales channel, scanner data from AssoBio shows a value of 530 Million Euros. During the case study a comparison was performed between the two main datasets in order to better understand their differences. For some products, like fresh and processed fruit/vegetables, the GfK household panel data shows a large degree of variation and it is not clear how much of the market is covered. In the next few years, the institution involved in collecting and publishing organic retail data in Italy should start a consistency check of the GfK household panel data, at least for some products.
- The estimate of the value of organic retail sales through specialised and other forms of sales should be financed by public institutions. ISMEA and AssoBio monitor data on domestic consumption only in the non-specialised market. There are no official statistics available on sales through the specialised channels: AssoBio obtains information from some of the largest distribution companies that exclusively supply specialised retailers, however these data are not publically available. Volumes and values of sales are not yet estimated for sales of organic products through public canteens, catering, restaurants, direct sales/farmers' markets and other alternative sales channels, such as solidarity purchasing groups. For these types of sales there are only Bio Bank data on the numbers of outlets. An annual survey of both specialised shops and other sales channels (farmers' markets, catering/restaurants, etc.) should be developed to estimate the size of the market and to cross check with the data from AssoBio.

Recommendations to improve data quality in the future (In the country/region and in other countries)

The objective of the Italian case study was to co-ordinate and to evaluate the results of pilot studies implemented in the Italian organic data collection system. For each of the areas of improvement explored, we can present the main findings and recommendations.

International trade level (imports)

A prerequisite for establishing a common protocol for import data collection is to match the information on importers involved in foreign trade with importers certified for organic trade. This is possible only by using a common business enterprise number (VAT number). Also, it is important that the import data

collection system concentrate on how to collect information on intra-European trade. With regards to some specific products, the amount of organic products imported from third countries is very low compared to intra-European trade.

Production level (volume and value)

The national volume and value case study results demonstrate various critical points. One major aspect, which would contribute to a substantial improvement in the availability and quality of data, would be a closer participation of the CBs in the data collection process of both volume and value data. However, this may be a difficult issue, since this involvement could involve additional workload and costs. While production data such as number of operators, areas of crops and numbers of livestock are currently collected by the various control bodies as part of the certification process, the delivery of volume and value data are not yet regulated by any legal requirements. Also, in this context, it would be necessary to facilitate participation of CBs to supply specific administrative data by creating appropriate financial compensation.

The Italian case study indicates that, when data on volume and value is not collected or is insufficient, the adoption of methodologies such as Maximum Entropy could provide an interesting compromise. However, this may require additional expert estimates for both yield and price data (in the Italian case study, a lot of time was spent collecting information regarding crop yield estimates from experts all around Italy). One possible way to increase availability of yield and price data would be the involvement of cooperative and other organic organisations that could systematically collect some of these values. The creation of a coherent and durable data collection platform at national level, within which a specific computer system is implemented, could help the above mentioned data collection and storage.

Domestic market

One of the main limits identified is the lack of a common definition of product groups: each market research company (GfK and AssoBio) defines its own product groups. Also, since at retail level organic data collection has little relevance when compared to conventional, it is difficult to find a common classification specifically adapted for organic market needs. The Italian case study offers an approach to the establishment of a common protocol for product definitions. In particular, the Italian case study shows that a combination of both the PRODCOM and CPA classification systems – which are already used by Eurostat – can be a solution for the product classification problem.

Suggestions for a code of practice on organic market data collection

Developing and implementing a data collection concept through the Italian case study showed a huge variation in the data availability and accessibility. Depending on the type of data, there is a lot of heterogeneity, with regard to both the level of detail of data that is stored electronically/manually and the format and structure of how the data are recorded in terms of measurement. Except for the production data, most of the data are collected following a specific classification, rather than adapting international standardised classifications like Eurostat or TARIC. In some cases, the reason might be that either the data collectors are not aware of international classifications, or that such classifications are not appropriate to the market needs.

The experience within the Italian case study shows that standardisation of organic food and farming data at the European level, and in some cases also at the national level, is still difficult to implement. Therefore, organic data from different countries and even from different sources within the same country are often not comparable. For instance, before the two datasets on Italian domestic trade were cross-checked for potential inconsistencies, a harmonised re-classification based on Eurostat classification was required.

Despite all, it should be noted that, if the aim is to construct a database at European level integrating trade data from all EU countries, this heterogeneous structure of documentation should be removed. This will avoid cost in the long term and increase the accuracy.

Last but not least, there are weaknesses related to the timeliness of different data collection and processing methods. The timeliness is a general problem in statistics, however the organic sector should work together in order to shorten the time for the publication of national reports.

France (by Nathalie Rison Alabert, Eva Lacarce and Dorian Flechet[35])

French case study objectives

To investigate how the Agence Bio data collection and annual report on the organic market could be further improved, the following activities were planned as part of the French case study:

- Production volumes data: In some sectors where data was lacking or incomplete (wine, fruits and vegetables, eggs); sources and methodologies for estimating the production volume and total balances have been set up. After agreement with the professionals involved, they will be included in the 2014 yearbook where relevant.
- Import / export volumes data: An assessment has been conducted together with the Ministry of Agriculture and the French customs of import volumes from third countries (type of data, categories of countries/products covered, accessibility, intra-EU exchanges and exports regarding the different legal procedures, official documents, surveys and methods in use or that could be used). More precise data are now available concerning imports, and a deeper survey has been conducted for exports and also for intra-EU trade (both imports and exports within the EU).
- Consumption volumes and sales: Due to the diversity of sales channels in France, a channel based approach was proposed specifying when possible more detailed categories of products. Estimates were made according to the various data sources available (annual market survey by Agence Bio, consumer panels, import and introduction estimates, etc.). When necessary, complementary studies were launched to tackle specific issues.

Setting up methodologies for estimating production volumes

In France, production volumes were already estimated in some sectors, such as cereals, meat and milk products. During the case study, further estimates have been discussed with the sector professionals involved, so as to include more data in the 2014 yearbook where relevant.

What additional data were collected?

Yields, production volumes, consumption on farm, losses, percentages not sold on the organic market, marketed production (including volumes dedicated to processing), imports, exports, initial and final stocks, retail prices, domestic use in value and in volume were collected for wine, apples, carrots, potatoes and eggs. These data, in addition to production areas or livestock numbers already available from the control bodies, enabled us to calculate a global balance for these products at the national level.

How data have been collected?

Available data estimates have been identified, each source depending on the product. Data sources include surveys carried out by interbranch[36] organisations, official surveys, specific market surveys by Agence Bio, and expert estimates.

Setting up a global balance allowed us to calculate some missing data. For example, (1) the marketed volume could be obtained by dividing the marketed value by the average retail price of the product, (2)

[35] Agence Bio, France

[36] See the French section of Appendix A for information about these *interprofessions*.

losses, including the part which is sold on the conventional market, could be obtained by comparing the marketed volume with the sum of the production volume, the volume balance for foreign exchange and the stock variation (for products such as wine).

For products that are not consumed just-in-time, stock estimates are available. However for those lacking these stock estimates, such as potatoes, production (in the sense of harvest) period was balanced with the marketing year (e.g. August to July for potatoes) instead of the calendar year, as requested by Eurostat for conventional production.

What costs have been incurred (direct costs and time input)?

About 10 person-days (2 per product) were needed to set up the methodology, identify the potential sources of data, collect, analyse, build the balance and validate these additional data. No other cost was involved.

Have stakeholder expectations been met?

A meeting of the main professional organisations involved (providers and users of the data), and experts has been organised to discuss and validate the total balance methodology for each chosen product. Resulting data and contributions were further discussed on a bilateral basis before and after this meeting. Professional representatives have expressed great interest in this work.

Relevance

Although it makes sense for values, the interest of summing up the volumes for the different products, as it is done in OrganicDataNetwork data sheets, has been questioned (e.g. summing cereals and wine grapes volumes). Sticking to a product or perhaps a sector-specific synthesis of volumes would be more meaningful for the stakeholders.

Having a view of the volumes that are produced and that therefore could be sold on the organic market is interesting. However, our French partners are more focused on the volumes sold on the organic market. Estimates of this should take into account the whole product chain, including:

- the proportion of volumes produced that are consumed on-farm or lost at the different stages before the final market (farm, collection, processing, etc.),
- the processing coefficients for the different final products (e.g. from wheat to flour to bread),
- and the proportion that is sold on the conventional market.

All of these data are sometimes very difficult to obtain. The problem is not specific to the organic marketing chain. A technical/economical field survey is required for additional insight.

In light of this, we have estimated both the production volume and the marketed volume that is either obtained or somehow deduced from the market sales. Further developments will try to better comprehend what happens in between these two market stages and which additional data should be collected to better understand the market. Product chains can be sketched by product circuit diagrams. Such market appraisals are already partly done in France for some organic products, such as wheat and flour, milk and cheese, meat, eggs and wine.

Comparable items should be compared, especially when balancing the data, for verification. For example, the French apple market can be divided into different segments: fresh apples; apples destined for cider; apples for juice; and apples for compote. If we are to compare or combine these separate markets, we should consider the item “apples before any processing”, knowing that both unit prices and

market data sources vary greatly. Product circuit diagrams cannot always cover all end-products. Therefore, for clarity, these may need to focus on unprocessed food products.

Accuracy

When sectors are not well organised, data are more likely to be missing. In the end, missing data are estimated but the resulting volume data are less accurate. Direct sales can be predominant in some sectors, like wine or vegetables, making national volumes difficult to estimate.

Some yields are the result of expert estimates, since dedicated surveys cannot be carried out yearly for every product (too costly in terms of time and expense). However, yields can fluctuate greatly from year to year, region to region, and farm to farm. Observation, experience and the daily work of organic control body inspectors and farm advisers could be very valuable to establish mean yields and adjust them where and when necessary, but it is still a step in the process of getting full, precise and reliable data.

Fruits and vegetables were a special case:

- Concerning vegetables, area data collection was an issue. Areas collected are not disaggregated into enough detail with regards to specific crops and productions are often infra-annual. Potatoes and carrots were taken as examples for estimating the feasibility of area, and therefore production volume, estimates. Although for potatoes, areas and volumes are consistent with the market, for carrots, the areas are greatly under-estimated and therefore so are the estimates of volumes produced. Indeed, carrots can be grown either at the field scale or at the "vegetable producer scale". At the vegetable producer scale, areas are not usually reported as "carrot" by the certifying bodies, and are more likely to be recorded in the more generic categories, "field-scale vegetables", "greenhouse vegetables", or even "other vegetable", as they are included over the year in small areas of production with other vegetables. Yield estimates were taken from scientific studies and expert assessments. For potatoes, yields vary greatly from 5 to 45 tonnes per hectare, depending on the climate and the region (with a confidence interval between 10 and 28 t/ha, leading to a mean of 21 t/ha). The yearly study by the potatoes interprofession enables an adjustment of the volumes and the yields.
- For fruits, the possibility of recording tree density and characterisation (often orchards are composed of mixed species of trees) of orchards by CBs (as it is declared for CAP subsidies) was discussed with CBs to improve yield estimates. However, no decision on this issue has been achieved yet. French fruit production is quite diverse but some productions are region-specific. Apple production, which is widespread over the territory, was taken as an example. However, the orchard yields vary tremendously according to their management (from meadow orchard – not always harvested- to shaped tree orchards, covered or not by nets), varieties (e.g. cider apples are less productive, some apples are sensitive to scab), and from year to year. Therefore, yield estimates are very approximate.

This explains why production volume estimates for fruits and vegetables, as well as area estimates for vegetables, should be used carefully. In some sectors, the yield might not be a good means to assess the production volumes. For instance, in the meat sector, the slaughterhouses are a good and reliable data source.

Timeliness

Most of these estimates were carried out in February-March 2014, on the basis of year 2012 crops and markets. Therefore finding the data was achievable. This would not have been the case if 2013 data had been sought. Every year, CBs send data on the area and production of the previous year. Agence Bio's market survey deals with the previous year farm accounts. Both need further data checking and processing, which are time-consuming. We believe that, in the future, periods for data calls should consider these time constraints.

Comparability

In the near future, a permanent and enlarged national group of experts should be set up in order to obtain more accurate annual yield estimates and other data required for the supply balance. It should eventually include all the relevant products, including cereals and the major milk and meat products already followed by trade organisations in France, in accordance with Eurostat and national guidelines.

What data quality checks have been implemented?

Concerning yields, it was verified that no organic yield estimate was above the mean conventional yield.

The supply balance equation provides a data check in itself, as it will only balance if all five sets of data (production, consumption, stocks, import and export) are accurate. Therefore, taking into account all available data to calculate the few missing ones was a way to ensure that no data was over or under estimated and if so, led to a full re-evaluation with the interbranch organizations involved.

The sources and methods of calculation were also documented during the assessment.

The meetings with stakeholders played a large role in the quality check of our methodology and results.

Assessing import / export volumes data

Since 2005, import/export data (i.e. products coming from or going out of France, including intra-EU trade) have been estimated by Agence Bio, with the expertise of AND International, as part of the annual survey of the organic market.

To collect as much detailed and complete data as possible, meetings and on-going communication took place from August 2013 to April 2014, involving the French customs, the French Ministry of Agriculture, and Agence Bio. Procedures, categories of countries and organic products covered, accessibility of data concerning intra-EU exchanges, and import/export volumes were discussed. It was concluded that import data from third countries could be made available from official statistics, and that annual surveys should be maintained and developed for the other types of import/export data (e.g. import and export within the EU and with countries with equivalence agreements).

What additional data were collected?

Concerning imports, 2012 and 2013 statistics on volume and value were obtained. Concerning other exchanges, more accurate estimates on value of imports and exports, from and to EU countries, as well as export volumes, have been obtained for the main organic products in 2013.

How data has been collected?

Imports:

When an organic lot is imported from third countries into France, the importer has to make a customs declaration as, in accordance with the EC organic regulation, a special control is required. The procedure uses an additional national code (CANA R058), specially created for this purpose. It is registered in box 44 of the SAD (Single Administrative Document) and accounted for in the national customs statistics.

A special protocol was initiated at the beginning of 2014 between the French customs and the Ministry of Agriculture, which allowed these data to be shared with Agence Bio.

No such organic code exists for export or intra-EU trade, as no special control by the customs is required for these.

Other trade (exports and intra-EU trade):

For the current 2013 survey, the questionnaire used by Agence Bio for the annual survey of the organic market was improved to make the questions on imports more specific and to distinguish import of products coming from third countries and from Member States. The questionnaire was sent to the main operators of the organic market (identified via the notification system in use in France), asking for their intra- and extra-EU exchanges, in volume and in value.

More detailed national evaluations were derived, taking into account both data sources.

What costs have been incurred (direct and indirect)?

About 10 person-days were needed to clarify the procedures involved with French customs, obtain the official import data necessary, and process it. An additional 7 person-days were needed to collect and process data from our annual survey of operators.

Have stakeholder expectations been met?

Relevance

A large proportion of products from third countries arriving in France are first imported by a Member State before being sent to France. Those movements are not visible in the French customs data and yet represent important volumes. Therefore, since 2005, we tried to consider all products originating from outside France in our market evaluation: for example, for biscuits we assume that they contain approximately 20% sugar that comes from third countries (as there is still almost no beet sugar being produced in the EU at this time).

After the case study and thanks to customs data we are now able to separate real imports from imports coming through the EU. For intra-EU trade and exports, it is still very difficult to obtain more than a value estimate because of too much partial data concerning volumes obtained in our surveys.

Accuracy

The Combined Nomenclature used by the customs slightly differs from the CPA and the OrganicDataNetwork nomenclatures. It also differs from the nomenclature used in our market surveys because of French stakeholders' expectations.

Aggregation of data was needed in order to protect individual data from being released (e.g. mussels and shrimps, quinoa, mate, etc.).

Some data were also excluded as they are not sold as alimentary products to consumers and therefore not included in our market evaluation: examples include essential oils used for cosmetics, seeds and reproductive material, flowers, or cereals for animal consumption.

Timeliness

Most of these evaluations can be done at the beginning of the year for the previous year with no particular difficulties, and will therefore be published in our annual statistics in June.

Comparability

As already mentioned in the OrganicDataNetwork statement of March 2013, it would be useful for other EU countries to render it mandatory to enter either a national code, or the C644 code (Certificate of organic inspection) in Box 44 of the Single Administrative Document (SAD) when importing organic products. This kind of code and an adequate procedure could also be set up for exports as part of the EC regulation. In this case, it must be assessed which competent authority will be in charge of these data.

As intra-EU trade is also important, and is linked to traceability and fraud prevention, more attention could be given to these data by the Member States, with the involvement of CBs. A solution is needed to deliver this kind of data without interfering with personal data protection.

What data quality checks have been implemented?

Basic quality checks were first applied to the data and their use in product balances (comparison and evolution between two years (2012 and 2013), total imports (= imports from third countries + introductions) < sales (including catering) and exports.

For import statistics, it was not possible to carry out further checks with data on volumes controlled by CBs at the level of organic importers, as data collection is not compulsory. For global import/export data estimates, quality checks were also performed by comparing different sources:

- Individual answers to surveys, compared from one year to another and, if possible with other sources (newspapers articles, websites, official data, etc.);
- Professional estimates or statistics, when such data exist (mainly for wine, cereals, fruits and vegetables);
- For this study, balances set up in the first part of the case study were used as a complementary check (consistency between the volumes produced in France, imports, exports and marketed volumes).

Information from all those sources allows the AND International expert team to compare tendencies from upstream and downstream players and draw sound estimates.

Improving consumption volume and sales

In the absence of the specific identification of organic sales in the official consumption data, an annual survey of the organic market has been carried out since 2005 by Agence Bio and the expert consulting company AND International. However, it failed to meet Eurostat data provision requirements in terms of volume, and categories of products used mismatched the nomenclature of EU data provision.

The 2013 survey was reviewed with the aim of obtaining more detailed data in as many fields as possible. The results of the product balances and the import/export data obtained during the case study were included in the new process.

What additional data were collected?

Firstly, a better compatibility was sought between OrganicDataNetwork classification and the classifications used in France for farmers' sales, retail sales, panels like IRI, and processors' sales, which do not always have the same detailed categories. The conclusion was that fruit and vegetables, and some processed plant product categories, could be disaggregated into greater levels of detail (which was not the case before).

Secondly, international trade was separated between import/export from third countries and intra-EU trade.

Thirdly, a better assessment of volumes was requested of our expert team, in contrast to previous analyses, where the emphasis was mainly upon obtaining value data of the market.

How data has been collected?

Agence Bio, as the competent authority appointed by the Ministry of Agriculture to deal with the notification of organic operators in France, gathers, among the required data, the type of operator, products, distribution channels, and available mail and telephone addresses.

Therefore, it was possible to establish, as in previous years, sample surveys and adequate questionnaires:

- one directed at farmers to obtain data on direct sales (7,539 farmers with a valid mail address out of 9,342 farmers who had been notified for more than 2 years - to exclude the conversion period – making direct sales and excluding wine);
- one dealing with retail sales by the 10 specialised organic store chains;
- one sent to the 10 main supermarket chains;
- one directed to the main processing operators (1,500 out of 9,350 notified processors) and separated by product categories:
    - Fruit and vegetables,
    - Milk products,
    - Meat and fish,
    - Liquids,
    - Salted processed products,
    - Other processed products,

- A special survey dedicated to wine operators (sent to 1,200 farmers and 100 cooperatives and trading companies).

Corresponding data collection spreadsheets, with automatic data extraction, were developed using the free software SurveyMonkey for direct sales, and the Sphinx software for the more complex questionnaires.

The meat survey was carried out this year together with the interbranch organization INTERBEV, which had previously led a separate survey, allowing better synergy and avoiding duplication of questions to the same operators.

For the second year, an analytical study has been carried out on the wine sector to better assess the market.

These surveys started in mid-February and a follow up was carried out by mail and telephone in March to get as many responses as possible. From the responses obtained, our expert team evaluated the total organic market for 2013 and was asked to fill the OrganicDataNetwork files as much as possible.

What costs have been incurred (direct costs and time input)?

Three person days were needed to compare the classifications mentioned above, to find a more compatible reference system, and add more detail to the questionnaires when possible/relevant. No other costs resulted from this special study, and the rest was part of our usual annual survey budget (about 100 days in total).

Have stakeholder expectations been met?

Relevance

This method of analysing the organic market data has been in place since 2005 and has improved each year since. With no other official source or data from the CBs, on volumes in particular, and because of the multiple channels involved, it is still the best analysis in France so far.

Accuracy

Global response rates vary from 13% (direct sales), 28% (processors), to 90% (supermarket chains). The more important the market is (for example milk, eggs), the more representative and accurate are responses. However, it is very difficult to obtain information from operators in small or competitive sectors, as they are reluctant to give data. Volume data remains much more difficult to obtain than value data.

Timeliness

Each year, the French market data survey is launched in February for a publication in June. A lot of work is needed to gather and analyse the responses, and then validate the subsequent estimates. Therefore, data are published in June.

Comparability

The greater level of detail obtained in the classification/categories will allow more accurate data to be sent to Eurostat, and so improve comparability.

What data quality checks have been implemented?

Estimates carried out by AND International take into account all available data, including: official data from the Ministry of Agriculture, and FranceAgriMer when available, results of direct surveys, Symphony

IRI data for general supermarket retail, and surveys for specialised retailers. This approach ensures that the reported data and trends are as accurate as possible.

The main checks also included: comparison with prior year data, investigation of unusual year-on-year movements, comparison with the overall food retail market movements within the country, use of supply balance equations.

Answers from both operators and retailers allow the expert team of AND International to compare trends from upstream and downstream players, and draw sound estimates.

The results have been presented to the data suppliers and partners of Agence Bio (official representatives from the Ministries of Agriculture and Ecology, interbranch organizations – INTERFEL, INTERBEV, CNIEL, EBF, SYNALAF, and stakeholders – FNAB, APCA, COOP DE FRANCE, SYNABIO) on April 18 and 30, 2014.

What improvements were made to data collection methods for certain types of data?

The FR case study mainly concentrated on improving current data collection and filling some data gaps, including volumes and import data, and more detailed retail sales.

New and more accurate methods have been established to get these data when needed by French stakeholders.

Are the methods for data collection transferable to other countries?

Production and sales volume:

The use of product balances to gather all available data (production areas or livestock, yields, import and export volumes, stocks, sales), and to calculate missing ones, is easily transferable to most countries.

Import/export:

Import data could be available in all European Economic Area (EEA) countries as special controls are done by the customs on organic products. To achieve this, it is necessary to create either a national code or use the C644 code (Certificate of organic inspection), which is mandatory in Box 44 of the Single Administrative Document (SAD).

For export and intra-EEA trade, dedicated surveys towards exporters and other operators are still needed as no organic codification exists.

Retail sales:

In the absence of specific identification of organic sales in official consumption data, and as panels are usually insufficient to cover the global market, special surveys targeting organic operators or organic sales are needed to collect detailed retail sale data. All market channels must be considered (direct sales, specialised stores, supermarkets, etc.). However, response rates can affect estimate accuracy and level of detail.

Feasibility of these surveys relies on the availability of contact registers and description information of organic operators. These can be retrieved either from the CBs or from the organic notification system, both collecting upstream classification data (by turnover, products, etc.). It can also represent an

important cost, depending of the market size and on its complexity, which often requires expert involvement.

Overall, partnership with interbranch organizations is worth reaching, and joint surveys often allow better coverage and information.

Other useful information to come out of the case study experience

Despite France's long experience in organic statistics, this study gave an opportunity for new developments and improvements, especially concerning import data, thanks to the collaboration with customs.

Recommendations to improve data quality in the future (In the country/region and in other countries)

Furthers developments will naturally follow this study, as part of the ongoing development of its methods that Agence Bio has made since it began dealing with organic production and market data in France: for example, new joint surveys with partners in the meat sector in 2014, work with the CBs to better assess yields and volumes, etc.

Work on classifications and definitions still need to be done to adapt official needs to the reality of the organic sector, and to make sound and reliable comparisons.

Suggestions for a code of practice on organic market data collection

1. Find a practical way to allow data collection from operators: either through CBs or the organic notification system. A simple and harmonised data collection system should be set up in all Member states.
2. Set up common definitions and description of data collection methods – for example, when considering consumption data, processed foods should be distinguished from raw products (seeds, ingredients, animal feed, etc.) and from products not covered by the organic legislation (cosmetics, textiles, etc.).
3. Allow classifications to be adapted to national needs and, if possible, according to the development of the sector, keeping aggregated levels to allow comparability.
4. Encourage a European customs approach on import/export for the main organic products.

Czech Republic (by Jakub Husák and Michal Lošták [37])

CZ case study objectives

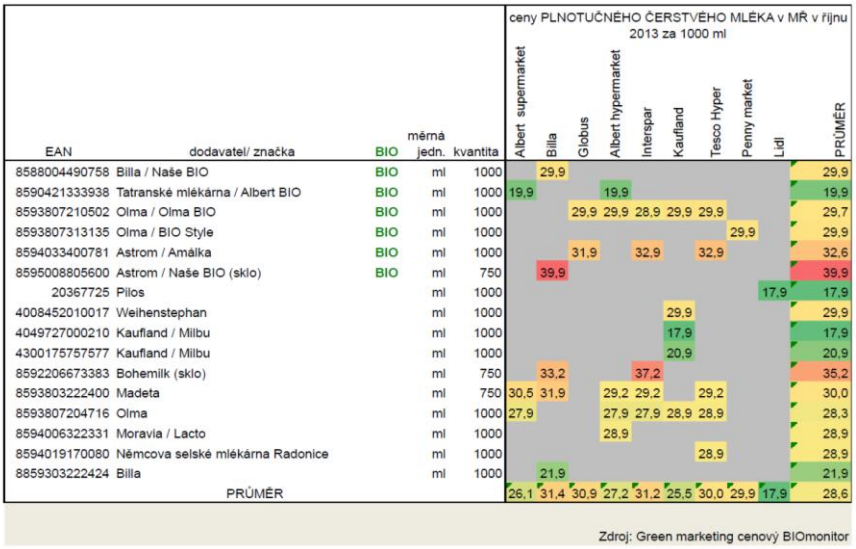
The Czech University of Life Sciences (CULS) worked closely with the Institute of Agricultural Economics and Information (IAEI) on the improvement of the market reports with the following objectives:

- To publish supermarket price data in the 2014 report. However, data included in this report will date from 2009-2013, as they are only publicly available now. The data are collected by Green Marketing agency on a commercial basis and are sold to customers, therefore the most recent data are not released for public use;
- To incorporate data on declared imports from non-EU member countries according to 1235/2008 regulations, into the Organic market data report;
- To potentially incorporate data from the FADN survey into the annual organic market report, to act as an additional source of verification and therefore increase data quality (FADN survey and survey of IAEI). In the end the data were not included due to data inconsistencies which are still under investigation.

Publish the price data from supermarkets into the market report

Price data for organic products from supermarkets are collected by Green marketing (GM) every two months, as part of the process of monitoring prices in all retail chains in the Czech Republic (only selected shops from each of the chains). Data concerning all organic foods in the retail supermarkets and hypermarkets operating on the Czech market (including information about EAN code, producers, supplier and brand) are collected on a commercial basis and the data are not publicly available, with customers having to pay for the data. In 2013, and following recommendations from the OrganicDataNetwork project, the Institute of Agricultural Economics and Information (IAEI) decided to negotiate with Green Marketing about using (e.g. buying) these data for the annual organic market report. Price data are considered to be very good analytical tools for suppliers, producers, super and hypermarkets, and the retail chains. However, they are not available publicly. Therefore the original agreement was to publish older data for the public. The final decision was to publish price data for the period 2009-2013. In addition, a comparison of conventional and organic food prices was also done for October 2013 (see Figure C9).

[37] Ceska Zemedelska Universita v Praze, Czech Republic



ceny PLNOTUČNÉHO ČERSTVÉHO MLÉKA v MŘ v říjnu 2013 za 1000 ml

EAN	dodavatel/ značka	BIO	měrná jedn.	kvantita	Albert supermarket	Billa	Globus	Albert hypermarket	Interspar	Kaufland	Tesco Hyper	Penny market	Lidl	PRŮMĚR
8588004490758	Billa / Naše BIO	BIO	ml	1000		29,9								29,9
8590421333938	Tatranské mlékárna / Albert BIO	BIO	ml	1000	19,9			19,9						19,9
8593807210502	Olma / Olma BIO	BIO	ml	1000			29,9	29,9	28,9	29,9	29,9			29,7
8593807313135	Olma / BIO Style	BIO	ml	1000								29,9		29,9
8594033400781	Astrom / Amálka	BIO	ml	1000			31,9		32,9		32,9			32,6
8595008805600	Astrom / Naše BIO (sklo)	BIO	ml	750		39,9								39,9
20367725	Pilos		ml	1000									17,9	17,9
4008452010017	Weihenstephan		ml	1000						29,9				29,9
4049727000210	Kaufland / Milbu		ml	1000						17,9				17,9
4300175757577	Kaufland / Milbu		ml	1000						20,9				20,9
8592206673383	Bohemilk (sklo)		ml	750		33,2			37,2					35,2
8593803222400	Madeta		ml	750	30,5	31,9		29,2	29,2		29,2			30,0
8593807204716	Olma		ml	1000	27,9			27,9	27,9	28,9	28,9			28,3
8594006322331	Moravia / Lacto		ml	1000				28,9						28,9
8594019170080	Němcova selské mlékárna Radonice		ml	1000							28,9			28,9
8859303222424	Billa		ml	1000		21,9								21,9
	PRŮMĚR				26,1	31,4	30,9	27,2	31,2	25,5	30,0	29,9	17,9	28,6

Zdroj: Green marketing cenový BIOmonitor

Figure C 9: Milk prices (fresh full-fat milk) in super and hypermarkets (retail chains) in Oct. 2013

Columns: supermarket name; row: name of diary (processor)/type (brand) of the milk, bio = organic; others = conventional milk, sklo = in glass bottle; volume in millilitres; source: Analýza vývoje nabídky biopotravin v maloobchodních řetězcích a jejich cen v letech 2009 -2013. 2014. Brno, ÚZEI; available at: http://eagri.cz/public/web/file/306464/Analyza_nabidky_biopotravin_2009_2013_priloha_Zpravy_o_trhu_s_biopotravinami.pdf

What additional data were collected?

The data consist of retail price data from 12 retail chains (hypermarkets, supermarkets, discount chains and drugstore chains). The data include about 2,900 organic products, and are collected six times per year. For the improved organic market report, data from the years 2009 – 2013 were analysed. Data obtained was more up-to-date than had been expected and originally agreed. However, there is a problem in that the database of retail price data did not include conventional prices for comparison, therefore the conventional prices were gathered in October 2013 (see Figure C 9). The data include retail prices of specific organic products (eggs, butter, milk, carrot, beef and chicken meat) showing development over time, development of supply of organic food products within retail chains, significance of particular categories of organic food products, and price comparison of organic and conventional milk and dairy products.

How data have been collected?

The data were originally collected directly in retail chains by hand (using pen and paper) using trained staff who are experienced organic food consumers. Data were then purchased and processed for inclusion in the organic market report. The prices are collected every second month.

What costs have been incurred (direct costs and time input)?

The costs originally incurred by GM are not made public, due to the commercial basis of the data collection. Generally, the costs will consist of the costs of data collection by hand, quality checks, coding and processing the data, creation and maintenance of a database, and data analysis. The direct costs incurred to buy the data are as follows:

One year of data costs 47,500 CZK, or approximately 1,727 EUR[38]. Total direct cost incurred for the data from 2009 – 2013 was 237,500 CZK, or approximately 8,635 EUR. Additional time input was needed to process and analyse the data – it was approximately 2 month's work for 1 full-time working person. This additional expense cost about 60,000-70,000 CZK, or about 2,500 EUR.

Have stakeholder expectations been met?

Relevance

Since the report has not been published yet, it is difficult to assess the relevance of the data. We assume that the data will be relevant because they are now purchased by supermarkets such as Billa, Globus and Pro-Bio trading company (Czech company processing and trading organic food). This suggests interest by stakeholders who find the data sufficiently useful to purchase them. Existing data should enable stakeholders to assess their position on the organic market in relation to others, what organic food is available on the market, how organic food is marketed in supermarkets, and to allow the comparison of prices.

A highly relevant area is the comparison of organic and conventional prices. The report documents which prices have remain relatively stable over the years 2009-2013 (milk, butter, yoghurt) and which had undergone some substantial changes (e.g. beef). Price comparison is important especially in light of media criticism over organic being more expensive than conventional.

In the case of milk, the price is more influenced by packaging than by its organic or conventional origin. Milk and yogurts sold in glass bottles are more expensive, regardless of being organic or conventional. One litre of organic milk in a glass bottle cost on average, in October 2013, 39.9 CZK[33], compared to the conventional average price in a glass bottle in retail chain shops of 35.5 CZK. The cheapest organic milk in October 2013 sold for 19.9 CZK per litre, while the cheapest conventional sold for 17.9 CZK. Only organic butter is more expensive than conventional, although expensive conventional butter can also be found in some retail chains (sold at the same price as the most expansive organic butter). This illustrated clearly that in comparing price, it necessary to compare the organic product with a conventional product of similar quality or packaging. This finding is thought to be highly relevant and important for the stakeholders.

Accuracy

Due to fact that all items are investigated in supermarkets every 2 months, we assume high accuracy of data. We cannot check the data against previous years, as this was the first year of publishing. However, Green Marketing has been collecting data for a long time as part of the Organic food price monitor - BIOMonitor.

Timeliness

Unexpectedly, more recent data (data from 2009 to 2013) were obtained for publication within the organic market report in 2014 (this report was published as an appendix to the regular organic market data report). As data are collected continuously throughout the year, the organic market report should easily be regularly updated. However, this will be dependent on future funding. The data were purchased from the Green Marketing agency by the Institute of Agricultural Economics and Information, which is funded by the Czech Ministry of Agriculture.

[38] 1 EUR = 27.5 CZK

Comparability

Comparability of the data on a year to year basis is ensured by using a constant data set (i.e. following the same products in time in the data set). It is possible to publish data showing the development of prices of main categories, differences between retail chains and perhaps also the relation between prices of organic products and prices of organic products using supermarket own-brand labels. Unfortunately, it is not possible to compare retail prices of organic and conventional products on the basis of this dataset, as the database does not include conventional prices. Therefore, an extra survey was done in October 2013 to collect conventional dairy product prices for that month.

What data quality checks have been implemented?

Due to the fact that the data were provided by Green Marketing (GM), these data are considered as relevant and are checked only minimally (GM guarantees their quality due to the method of their monthly data collection). The data quality checks have been focused on time series analysis and unusual values were investigated. In terms of dairy products, the comparison of organic food prices and conventional food prices was done. The series of the prices for 2009-2013 enabled annual price comparison.

Incorporate into the market report the data from declaration on exports and imports

The export/import data to/from non-EU countries that are not listed in the compliance list according to EC Regulation 1235/2008 are available from the Ministry of Agriculture (and also from the CBs). The export/import data to/from non-EU countries which are listed in the compliance list according to EC Regulation 1235/2008 are available from Customs Administration. However, these data have not been processed nor published yet. Therefore, the OrganicDataNetwork project collected and processed the data with the aim of possible publication of the first type of data (the export/import data to/from non-EU countries which are not listed in the compliance list according to EC Regulation 1235/2008). The publication of the second type of data depends on the agreement between Ministry of Agriculture and Czech customs Administration with regards to the availability of customs declarations.

What additional data were collected?

Only the data from authorisations/certificates (import authorisations and certificates for export of organic products from/to the non-EU countries which are not listed in the compliance list) according to 1235/2008 regulations for 2012 were collected. CBs also provided additional data from 2006 – 2012.

Exports records in 2012 included only 50 items. The most significant export is of baby food from one Czech company to Turkey (399,555.00 kg). Others include processed grain to New Zealand (4,667 kg), organic banana puree and apricot puree with white grape concentrate (the same company exporting baby food, again to Turkey, 30,686 kg), and 504 kg of rice cakes to Serbia. We learnt that export through the bodies which are not listed in the compliance list according to EC Regulation 1235/2008 is not big and does not give much information about organic exports. Because the exporting companies are private companies, they do not publish any public reports on their activities, which would otherwise have been useful to check the numbers presented.

Imports are more diverse (280 records in 2012). The records provide information about: country of producer, name of importer, name of imported product. These need to be recoded into the classification categories to provide data on standardised organic food items, imported volume and name of control body.

Because of the small number of records it is likely that the data only cover a small proportion of exports and a slightly higher proportion of imports. Therefore the decision was made to publish only imports as the larger amount of data enables more quality checks. Moreover import data from import authorisations were supplied for other years from 2006 by control bodies.

We also wanted to collect data from customs declarations to/from non-EU countries which are listed in the compliance list according to EC Regulation 1235/2008 and are available from customs Administration in order to obtain a more realistic picture about organic food exports and imports. Negotiations with customs Administration were however quite complicated (despite the active participation of Ministry of Agriculture) so these data have not been collected yet. On the other hand, it was agreed that customs Administration should provide the necessary data for processing and publishing in next year's organic market report.

The published data consist of development of imports from third countries (which are not listed in the compliance list), from 2006 to 2012, in total and by countries, the most typical organic products which are imported from particular third countries, the share of imports by country, and development of volume of organic products according to CPA classification between the years 2006 and 2012.

How data have been collected?

The data are available in disaggregated format as Import authorisations and Certificates for export of organic products – each exported/imported product has its own record. It was necessary to go through all of these declarations, to then aggregate and categorise the data. This was sometimes quite complicated due to the use of original designation (e.g. the records can be in the language of the export/import destination or origin). The data are also available from CBs, as the importer must report each delivery under 1235/2008 regulation.

What costs have been incurred (direct and indirect)?

The only additional time input (personnel effort) was incurred to collect, process and analyse the data. To process import/export authorisations for one year accounts for 3-4 working days for one person.

Have stakeholder expectations been met?

Relevance

No information yet about the relevance of data for the stakeholders. The data only cover a small proportion of imports. To have more relevant data, the information from customs declarations with non-EU countries will be needed. However, these were not provided yet by customs authorities. The data indicated the development of these imports and the categories (types) of imported organic food from these countries. Therefore, the data might be relevant for the importers.

Accuracy

As there is only small a proportion of these data: almost none in terms of export and a few in terms of imports, mostly exotic food or berries, the records will not provide enough data. One record (import authorisation) reported the import of 1.5 million litres of pomegranate juice. It was found to be an unrealistic number as the Czech Republic has about 10 million inhabitants, and average juice consumption per capita is 5.4-9.1 litres per year in total (i.e. including all conventional and organic fruit juices).

Timeliness

The data are recorded continuously during the whole year. Therefore, the data could be expected to be available for the organic market report regularly (depending on working capacity to collect, aggregate and categorize them), unless they are all collected at one central point (e.g. in Brussels) which is now being discussed at EU-level.

Comparability

Comparability of the collected data is quite complicated, as the list of non-EU countries which are not listed in the compliance list according to EC Regulation 1235/2008 is changeable from year to year. On the other hand, after the collection and publication of the data from customs declarations (from/to countries which are listed in the compliance list according to EC Regulation 1235/2008), the comparability should be increased.

What data quality checks have been implemented?

Due to the lower (or non-existent) comparability of the data, it is difficult to implement any quality checks. In the main, unrealistic value checks were implemented. For example, when working with the data, we found out that 1,500,000 litres of organic pomegranate juice (0.15 litres per capita in Czech Republic) were imported from Azerbaijan. It seems unrealistic when per-capita juice (conventional and organic) consumption is 5.4-9.1 litres per year. Moreover, the webpage of the importing company does not provide more information.

Incorporate data from the FADN survey into the market report

Data on the economic situation of organic farms, including costs and revenues, are collected annually by FADN (Farm Accountancy Data Network) via a survey of selected organic producers. This is as a supplementary part of the general FADN survey. From these data, it was possible to incorporate farm level prices into the organic market report however, other FADN data were not included due to inconsistencies between the data and the IAEI survey data.

What additional data were collected

Data on price at farm level were collected, but the improvement is mainly in processing the data and incorporating them into the organic market report. It would also be possible to incorporate other data (e.g. yields) from the FADN survey, but there are still inconsistencies with data from the IAEI organic market data surveys. However, the discovery of these inconsistencies is at least a demonstration that triangulation of data collection methods helps to increase data quality by highlighting potential issues. Due to data inconsistency between FADN data and data from questionnaires, this section was not added into the report for 2014 (due to the schedule for publication, insufficient time was left for data harmonisation). The Ministry of Agriculture did not wish to publish inconsistent data which is good indicator of the ministry awareness of the necessary data quality for publicly available data.

How data have been collected?

Originally, the data was collected using the FADN sample survey of 258 organic farms (193 family farms and 65 corporate farms). This organic sample represents different types of production, farm size, and legal status (family farm, corporate farm business, etc.). For the purpose of publishing additional information within the organic market report, appropriate data from the whole FADN organic survey were selected and processed.

What costs have been incurred (direct costs and time input)?

The data are originally collected through the general FADN survey. Therefore, it is difficult to separate the costs of the FADN organic sector survey from the whole FADN survey. The costs of FADN which are under EU (DG AGRI) are about 14,000,000 EUR per year. Total cost of FADN in the Czech Republic in 2012 was 17,368,314 CZK[39], or about 630,000 EUR . The cost per farm differs based on its size and type of farm (production). On average, the cost per farm (conventional or organic) is 8,000 CZK (EUR 290). For 258 organic farms (large scale farms, corporate or family run), the average cost is more than 1,260,000 CZK (FADN at family farms is more costly), or about 46,000 EUR. In addition to these costs, additional time was needed to process and analyse the data.

Have stakeholder expectations been met?

Relevance

The report has not been published. But after the presentation at BioFach, the Czech visitors of the working group considered it highly relevant to also include the data from FADN. FADN provides information about internal production of the farm. For example, many Czech cows are in stables, they do not graze meadows. This means that in conventional farming, feed is produced on one farm, representing this farm's output, and is then purchased by a dairy farmer as an input, with milk as subsequent output. In organic farming, the situation differs. For example, an organic farm has 1,000 ha but produces milk and beef. Hay is consumed on the farm (it is not marketed); therefore it looks like there is no output from the land. Critics of organic farming say that 12% of land under organic farming produces only 1% of production in organic farming. Therefore, this internal use of the feed produced in the farm should be taken into account. The data to do this are provided by FADN. The problem however, is that there is inconsistency of data from both FADN and the survey done by CBs and coordinated by IAEI. Once the inconsistency is resolved, the relevant data will be available.

Accuracy

Consolidation of data from FADN and organic market data survey (their inconsistencies) is still an issue. Since both reports are published by the Institute of Agricultural Economics and Information (IAEI), and are funded by Ministry of Agriculture, there is great interest in consolidating the data before making it publicly available as a report. The Ministry does not want to publish inaccurate and inconsistent data (there are still some data gaps from the survey). On the other hand such comparison of data from FADN and organic market survey is another way of carrying out data quality checks.

Timeliness

Because the data are collected every year, it should be available regularly. Furthermore, FADN survey is implemented by IAEI, so, there should not be problems with availability of the data.

Comparability

Comparability of the data on a year to year basis is ensured by having a larger sample of organic farms and a uniform methodology, as in the Czech Republic FADN has a specific organic sample, not just the organic farms within the sample of all farms. On the other hand, the data have only been collected since 2011 and this year (2013) is the first year that selected data (prices at farm level) have been used in the organic market report. For these reasons, it is impossible to use time series comparison. However, it is possible to compare the data from FADN survey and IAEI survey (although with some consolidation of the two datasets required), mainly for the purpose of data quality checks as indicated above.

[39] 1 EUR = 27.5 CZK

What data quality checks have been implemented?

The data from FADN survey are checked using a strict methodology developed for FADN, but when comparing FADN and IAEI questionnaire survey data, some inconsistencies are still found. The main data checks have been the checking of extreme values and comparison of data from the FADN survey and from the IAEI survey. This study suggests that triangulation of data collection methods helps to increase data quality because the data are checked through various data collection methods (FADN and IAEI surveys).

Estimating the total organic retail market

In the Czech Republic, there has until now not been any comprehensive statistical survey for organic market research covering producers, processors, the retail sector and households. Green Marketing has data which were not publicly available until the Czech Republic case study and the most recent market report. They carry out surveys in retail chains. For households the information on where they buy organic food is available from 2011 due to a survey by INCOME Gfk but organic is recorded together with "healthy food" which does not need to be organic. What is missing is a regular (e.g. annual) comprehensive study of households and of all actors operating in the organic market. Therefore, the survey contacted all producers and distributors from the register of the actors in the organic sector in order to identify the volume of the organic food they offer. The data are collected by Institute of Agricultural Economics and Information (IAEI).

There are two approaches which are used to cross-check each other:

a) The first way is to ask all registered food processors and distributors within organic farming (629 in 2012, with possible exclusion of 309 with no organic market activity). IAEI contacted 320 bodies from which about 50 (usually small businesses) did not respond. The questionnaire included questions on total turnover of organic products, division according to type of organic products (36 subcategories), percentage of direct imports and distribution channels (which part is exported and by which distributors are the products sold – it is an especially important question to avoid data duplication). From these questionnaires the turnover of each of the processors or distributors of organic products can be found. The size of the organic retail market is defined as the sum of turnovers of registered processors and distributors for the sale of organic products to final consumers in retail shops or through direct marketing. These turnovers are increased by about 30% to take into account the retail margin over the producer prices. Additionally, the turnovers are increased for the sale of imported organic food which international retail chains (13 major retail chains) import into Czech Republic from abroad (see the second way of estimating).

b) The second way is to approach the 13 major retail chains in the Czech Republic (Ahold, Billa, Coop, dm drogerie, Globus, Kaufland, Makro, Marks and Spencer, Penny Market, Rossman, SPAR, Tesco and Lidl) with similar questionnaires and ask them about total turnover of organic products, division according to the type of organic products (only 8 subcategories) and percentage of direct imports. The main problem with this way of estimating the total organic market is that the retail chains usually do not monitor organic products separately from conventional. They also have different classification of particular types of organic products from international and Czech standards. This is why these surveys are only used for data crosschecking with the results of the questionnaires for processors and distributors.

With both approaches, the problem lies in the fact that neither set of surveys are compulsory. They are distributed by IAEI, and not by Czech Statistical Office or Ministry of Agriculture. It therefore takes great effort to obtain relevant and sufficient data, using not only prepared questionnaires, but also phone interviews for the main retail actors, and even using some informal social networks.

What improvements were made to data collection methods for certain types of data?

It is possible to identify some improvements to data collection methods for market data published in the organic market report:

a) Improvement of register of organic entrepreneurs (distributors (wholesalers), producers, and farm processors), in cooperation with CBs. This public register is used to contact all actors in the organic sector. Establishing the REP (discussed in the section on the Czech Republic current status of data collection above) is an improvement in data gathering.

b) The major organic actors that are reluctant to provide data to GM are contacted directly by IAEI (using its authority as a state funded organisation and as a subordinate to Ministry of Agriculture).

c) IAEI also communicates with supermarkets to cross-check the data (range of the sales at the supermarkets and turnovers of producers and distributors /wholesalers). This is done mainly to eliminate multiple counting of turnovers during trading with organic products.

Are the methods for data collection transferable to other countries?

The main transferable method appears to be using FADN survey to collect organic data at farm level, particularly to create a special organic sample, together with the general sample used by FADN. Using import authorisations and certificates for export of organic products as sources of export/import data to/from the non-EU countries seems to be transferable. However, they do not provide all information about export/import, and therefore there is the question of how much to use them. Stakeholders indicated that the possibility of a new regulation requiring export and import declaration, to be collected centrally at EU level, might improve the situation.

Other useful information to come out of the case study experience

There are a variety of organic market data available in the Czech Republic. Therefore, the problem is usually not a lack of data, but instead, data are collected by various actors (sometimes also for private use only), with a lack of coordination and cooperation between them. Furthermore, specific requirements on organic data collection from public organisations are missing. In this context, the OrganicDataNetwork project triggered better coordination of actors and resulted in more data being collected.

Recommendations to improve data quality in the future (In the country/region and in other countries)

Recommendations considering the Czech situation (but maybe transferable to other countries):

a) To cooperate mainly with large-scale organic actors (these actors could be identified in cooperation with CBs),

b) Data are collected by different organisations (e.g. Czech Statistical Office, the State Agricultural Intervention Fund, Central Institute for Supervising and Testing in Agriculture), but there is not any explicit task to collect organic data. The organic data are collected by these organisations only incidentally. So, the recommendation is to explicitly incorporate organic products in the regular surveys of these organisations. Also sharing organic data between organisations would be useful.

General recommendation:

With regards to price and market data, there seems to be an ideal situation in Nordic countries, where supermarkets provide organic data to statistical offices free of charge. Taking a similar approach in other countries could simplify organic data collection and improve data and allow more complete market data (from large scale organic actors) to be available.

Suggestions for a code of practice on organic market data collection

There is a requirement for commitment from actors in the area of collecting and processing organic market data (if we want to have accurate data in time, people who work in this area must be committed to their work). In the Czech Republic the results of the surveys depend on the commitment of all of the stakeholders. If there is not any commitment, then the data will not exist.

Mediterranean (produced by Bteich Marie Reine, Pugliese Patrizia and Al-Bitar Lina on the basis of reports prepared by national experts[40])

Building on the current state of data collection (see Appendix B) CIHEAM-IAMB worked closely with mainly five MOAN country delegates and representatives of other relevant institutions in two countries from the Southeastern Mediterranean, Lebanon and Tunisia, and three EU Candidate and Potential Candidate countries of Albania, Serbia and Turkey. Some data from Morocco were also included in the final publication.

The main aims across all countries were

- to foster the use of EUROSTAT classification for organic area and operator statistics
- cross-check and improve the accuracy of presented data
- improve the exploitation of available data on organic exports
- gather in short, but comprehensive and updated, country reports, available relevant information, from published and unpublished sources, about the organic sector setting and market.

Turkey (country report prepared by Firat Kon and Erdal Süngü[41])

Turkey case study objectives

CIHEAM-IAMB worked in close collaboration with MFAL (Ministry of Food, Agriculture and Livestock) through MOAN representative, AEA (Aegean Exporters' Association) and local experts on producing a first organic statistics report for Turkey, and in particular to:

- Report the current state-of-the-art of the organic data collection in Turkey and in particular:
    - describe and analyse the current organic Data Collection System (DCS);
    - identify the actors and tools involved in the organic DCS, their roles and interactions;
    - identify the organic DCS limits and potential: assess the organic DCS according to the quality dimensions established by Eurostat;
- Collect and classify the production (area and volume) data for 2012 by type of crop and animal, as well as the number of operators according to the Eurostat categories;
- Cross-check export data of three selected crops from the two available sources: CB's product certificates and AEA dataset.

Production area and volume data

The list of production data and corresponding figures for 2012 (areas and volumes) was extracted from OFIS (Organic Farming Information System) by the assigned expert, in collaboration with the officer responsible for organic statistics at MFAL, and translated. The assigned expert placed each product (plant or animal) in the appropriate classification group and attributed the corresponding identification code according to the CPA 2008. Within this exercise, synonyms were cancelled and corresponding data

[40] CIHEAM, Italy
[41] Ministry of Food Agriculture and Livestock, Turkey

incorporated, and local product names were substituted with internationally adopted nomenclature. The classification was proposed to MFAL to replace the current alphabetical list in OFIS.

Yield data for the six major cultivated crops in Turkey (hazelnut, fig, apricot, grape, apple and cotton) were obtained.

What additional data were collected?

No additional data were collected. The available data was harmonised with the European CPA 2008, making cross-checking possible and making identification of products easier and more accurate.

How data were collected?

Data were collected from OFIS dataset.

What costs have been incurred (direct costs and time input)?

The exercise of translating and codifying the list of crops and products in OFIS was carried out by an external individual.

Have stakeholder expectations been met?

Does not apply to our case.

Comparability

By introducing an international classification to the data collection, comparability with other national and international datasets became possible.

International trade data

Export volumes and values

Data on export volumes and values of nine product categories deriving from three organic crops (grape, fig, tomato) from the Aegean region were cross-checked for four years (2009 to 2012). Data were collected from the two available export data sources in Turkey: CBs and AEA. The two datasets were harmonised and then cross-checked. High inconsistency between AEA and CBs was identified: official export data published by AEA on the MFAL website reflects only 13.5% of the real export amounts registered with CBs.

What additional data were collected?

Export volumes and values for the major five exported crops and products in the Aegean region were collected from CBs for the first time. This was achieved by sending an Excel survey to be filled by each CB, as it was impossible to have direct access to the product certificates, due to confidentiality restrictions. Data from AEA being available and easily extractable from the E-BIRLIK, they were directly exported into Excel tables.

What costs have been incurred (direct costs and time input)?

No direct costs were incurred. Data collection and analysis were carried out in the framework of the institutional and research cooperation between CIHEAM-IAMB and the Turkish institutions. However, it is noteworthy to underline that data collection from CBs was highly time consuming, as the data communicated were often incomplete and needed integration.

Have stakeholder expectations been met?

This does not apply to our case.

Areas of improvement: the Turkish case study achievements

Conducting the case study in Turkey allowed identification of gaps within the organic data collection system in the country. The main achievements of the Turkish case study are as follows:

- A detailed and comprehensive report was produced on the organic DCS, including the actors and tools involved, the main flows of information, and main gaps. This report proved to be extremely useful and timely since OFIS is currently under revision and in the process of being fully integrated into the national agricultural statistics. The exercise provided a number of useful inputs for OFIS revision.
- A harmonized list of organic crop products and livestock using international codes for identification ready to be used in OFIS was produced.
- A complete table with 2012 data for all crops production areas, volumes and livestock numbers, harmonised with the CPA-08 classification (categories and codes) was compiled,
- A complete table of available data on exports by product types, volumes and values (when available) and country of destination of the selected organic products from Aegean region for the 2009-2012 time period was produced.

Are the methods for data collection transferable to other countries?

Turkey has had a well-implemented and functional organic Data Collection System since 2005. The methods used in this case study to improve the system classification and comparability of data with other datasets could be transferable to all countries who intend to set up a collection system harmonised with the international classifications and codes.

Other useful information to come out of the case study experience

Conducting the case study in Turkey and identifying the gaps within the organic DCS helped in:

- Raising awareness gradually at the competent authority (MFAL), which then took action to improve the organic DCS,
- Fruitful and effective interaction of the different institutions involved in the organic data collection. MFAL convened meetings of the national institutions dealing with agricultural and organic statistics to debate and identify gaps, and agree on solutions to overcome them. Meetings and exchanges between responsible officers from MFAL, experts from AEA, the Turkish Statistical Institute (TUIK), CBs and the universities were organised, and the options to harmonise the product classification adopted in OFIS with the international classification were discussed,
- Result-oriented exercises on yields calculations and cross-checking of production volumes and exports were carried out.

Recommendation to improve data quality in the future

From the experience of the Turkish case study, it is recommended that:

- The organic unit at MFAL be strengthened in terms of human resources and capacities, in order to fully exploit and analyse the existing data collected in the organic DCS,
- Actual use of HS code is made for the compilation of product certificates, and to introduce it into OFIS, which would allow the comparison of the different existing datasets on export.

Suggestion for a code of practice on organic market data collection

1. Have a clear and detailed description of data collection and analysis methods. This is fundamental for those who start building up a new system of data collection for organic or need to improve and expand it (most of MOAN non-EU countries). The MOAN case study showed that the description of the data collection and analysis methods should cover all types of data starting from production areas and volumes to the prices and market volumes and values data. Therefore, it is essential that the description gives clear indications on:
    a. the source of data (expert estimate, calculation) and explain how it was obtained,
    b. the representativeness of the data collected,
    c. the data checks carried out (e.g. comparison with previous year data and investigation of unusual year-on-year variations and/or between datasets).
2. Advise the carrying out of cross-checks. The MOAN case study adopted this approach to identify and determine inconsistencies in available data.
3. The use of a trusted third party to collate and analyse data may allow greater access to data by enabling local authorities to upgrade and consolidate their data collection system. The mentioned role of the "trusted third party" could be effectively played by international organisations (e.g. CIHEAM-IAMB) and institutional networks (e.g. MOAN) that are seen as qualified to assist in such an exercise, as well as being neutral and unbiased since they essentially serve institutional interests and operate to achieve shared strategic objectives
4. Advise institutional dialogues at national and inter-countries level.

Lebanon (country report prepared by Pauline Eid Saad[42])

Lebanon case study objectives

CIHEAM-IAMB worked in close collaboration with the Lebanese Ministry of Agriculture (MoA) on producing a first organic statistics report for Lebanon, and in particular the two organisations joined forces to:

- report the current state-of-the-art of the organic data collection in Lebanon;
- collect and classify the production (area and volume) data for 2012-2013 by type of crop and livestock, as well as the number of operators according to the Eurostat categories;
- cross-check production volumes communicated by CBs to MoA, for selected organic crops, with calculated production volumes based on yield estimates (made by experts from CBs and from the Lebanese organic cooperative) and available land area figures;
- calculate national average yields for selected organic crops cultivated in Lebanon and compare them to conventional yields;
- map the local market data holders and establish a first contact with them to explore the possibility of gathering their data on volumes, values and prices;

[42] Ministry of Agriculture, Lebanon

- collect and analyse data on export (volumes, values and country of destination) from all organic exporters in Lebanon;
- establish a first contact and dialogue with the registered organic importers to explore the possibility of gathering data on imported products volume, values and origin from them.

Production area and volume data

Within the framework of the case study and for the first time in Lebanon, MoA had full access to the CBs files on organic operators data, from which it extracted data on production areas, volumes and yields. These data were, for the first time, cross-checked by means of direct communication with a large number of organic operators through workshops and phone contacts. Production areas and volume were classified according to the Eurostat categories.

What additional data were collected?

No additional data were collected. However, MoA improved its template for organic data collection to include more categories, including details about the crop types and areas planted with different crops, following the classification of the Eurostat categories. The template format was also customised to be more functional and easy to fill in.

How data were collected?

Data were collected from CBs operating in the country.

What costs have been incurred (direct costs and time input)?

MoA invested time in *i)* inputting all production area and volume data in Eurostat, *ii)* cross-checking production yields of selected crops from different sources, including experts from CBs and the Lebanese national organic cooperative, and *iii)* comparing the organic yields to the conventional ones for the selected crops.

Have stakeholder expectations been met?

This does not apply to our case.

Retail volumes, values and prices

MoA identified and contacted all 17 organic retailers in Lebanon. All were asked about the retail volumes, values and prices at retail of their five best-selling organic products. However, only the largest two responded, therefore no representative data were gathered, but contacts are still ongoing with those who did not respond.

MoA contacted the sole organic caterer operating in the country. However, it did not show interest in the initiative and did not provide any data.

What additional data were collected?

Since this initiative of contacting the operators directly was the first attempt at gathering data on retail volumes and values, the identification of all of the retailers and the response of the biggest two retailers in the country could be considered as the basis for a future extensive and structured data collection.

How data were collected?

All the organic retailers in the country were contacted by MoA through e-mails and phone calls.

What costs have been incurred (direct costs and time input)?

MoA invested time in gathering information about the retailers and establishing a direct contact with all of them.

Have stakeholder expectations been met?

Does not apply to our case.

International trade data

Since there is no comprehensive list of all importers of organic products, MoA contacted all those registered with the CBs. Data on the volumes and values by type of imported products and the countries of origin were requested. Only two provided complete data.

All exporters of organic products have to be certified in order to export their products. According to the CBs registers, there were five certified organic exporters in total in 2013. The MoA contacted them all, and for the first time requested their data on exported products. Detailed feedback was received from all organic exporters.

What additional data were collected?

Partial figures have been collected for the imported products regarding type, volumes and prices, but still cannot be published as not relevant. It was agreed with MoA that further dialogues and meetings will be organised to discuss and propose a strategy to collect a comprehensive set of data for imports.

For the first time, complete data on exported organic products were gathered by the MoA. Information on the type of product exported, countries of destination, volumes, and values were registered, and tables and figures were produced.

How data were collected?

Data were collected directly from exporters who filled in the template tables developed for this purpose.

What costs have been incurred (direct costs and time input)?

MoA invested time in contacting the exporters, and CIHEAM-IAMB contributed by providing support and consultancy to organise and elaborate the collected data. Efforts invested were worthwhile since the data collected are comprehensive.

Have stakeholder expectations been met?

Does not apply to our case.

Price at farm level

Due to the lack of human resources and time, it was impossible to conduct a field and in-depth survey on prices at farm level. The MoA contacted several organic farmers and producers of different products categories from all the regions to get information about the price at farm level of their organic products. Farmers did not have accurate and well-defined prices but gave a rough estimate of 20% to 30% more compared to conventional products. These estimates were confirmed by the CBs.

What additional data were collected?

No additional data have been collected but a confirmation of an already existing estimate of the price premium was obtained. A more accurate and targeted survey could be the next step to get more reliable and precise information.

How data were collected?

Data were collected directly from CB's experts and farmers.

What costs have been incurred (direct costs and time input)?

MoA invested time in contacting the farmers and experts from CBs.

Have stakeholder expectations been met?

Does not apply to our case.

Areas of improvement: the Lebanese case study achievements

- First report on the status quo of the organic data collection system in Lebanon,
- Use of an international classification (Eurostat) to collect data on land area and product volumes, operator type and number, and livestock production volume,
- MoA had full access to the files of CBs; being able to identify all operators and their related data,
- Map existing trade and local market data holders, and identify potentially available data,
- Work on available organic export data to map key data holders, cross-check available sources and produce a first data presentation.

Are the methods for data collection transferable to other countries

This case study is unique, considering that Lebanon is a small country and the MoA was able to map and contact all stakeholders of the organic sector. The phone surveys that involved almost all the operators (producers, exporters, importers and retailers) and the workshop organised by the MoA could be done only in contexts similar to the Lebanese, where the national authority can reach all the actors of the sector and has the willingness and potential to do so.

Moreover, the Lebanese organic sector development and structure are different from the other South-Eastern Mediterranean countries. While in almost all the South-Eastern Mediterranean countries, the organic development has been driven by export and the local market is nearly non-existent, in Lebanon the local market is rather developed and exports are very limited to a few products types and to only some destinations. Therefore, efforts could not but concentrate on the local market investigation, which can be done either by the local authority (MoA) or by trusted third parties, such as international organisations (CIHEAM-IAMB), which could guarantee confidentiality and expertise. However, when possible, doing surveys for data collection through the local authority could be a twofold solution for the non-EU Mediterranean countries to get higher responses. Firstly, to be more successful since in such countries where the political will has been the driving force for the development of the organic sector, people collaborate with and respect the authorities, and secondly, to sensitise the decision makers and help them take action toward the development of the sector.

Other useful information which came out of the case study experience

Conducting the case study in Lebanon set off a series of changes in considering the statistics at MoA level. It helped in identifying the sensitive issues in data collection, opening the path to further consider confidentiality concerns, especially when tackling the market/price data. The case study drove the setting up of provisions to identify all organic importers. The carrying out of the Lebanon case study experience particularly led to:

- Raising awareness of the competent authority (MoA) about the importance and relevance of collecting, organising and analysing data from CBs and stakeholders,
- Understanding the need to have skilled people to carry out focused surveys for data collection and to develop datasets based on international classifications,
- Building up a strategic thinking through the uses of data collected and the data collection system improvement,
- Building contact and dialogue between the MoA and all the organic stakeholders and operators to strengthen their cooperation and data exchange,
- Due to the ceasing of activities of one CB by the end of 2013, some difficulties were encountered in accessing and using their data.

Recommendation to improve data quality in the future

Lebanon case study showed that it is fundamental to use international classifications for production areas and volumes data collection and storing. Therefore, production data should be collected in a unified format of classification.

No recommendation could be made for the other market data collection, such as export, import and retail, as for now the efforts are focused on initialising data collection.

Suggestion for a code of practice on organic market data collection

1. Have a clear and detailed description of data collection and analysis methods. This is fundamental for those who start building up a new system of data collection for organic data, or need to improve and expand it (most of MOAN non-EU countries). The MOAN case study showed that the description of the data collection and analysis methods should cover all types of data, starting from production areas and volumes to the prices and market volumes and values data. Therefore, it is essential that the description gives clear indications on:
    a. the source of data (expert estimate, calculation) and explain how it was obtained,
    b. the representativeness of the data collected,
    c. the data checks carried out (e.g. comparison with previous year data and investigation of unusual year-on-year variations).
2. Advise the carrying out of cross-checks. The MOAN case study adopted this approach to identify and determine inconsistencies in available data.
3. The use of a trusted third party to collate and analyse data may allow greater access to data by enabling local authorities to upgrade and consolidate their data collection system. The mentioned role of the “trusted third party” could be effectively played by international organisations (e.g. CIHEAM-IAMB) and institutional networks (e.g. MOAN) that are seen as

qualified to assist in such an exercise, as well as being neutral and unbiased, since they essentially serve institutional interests and operate to achieve shared strategic objectives

4. Advice institutional dialogues at national and inter-countries level.

Serbia (country report prepared by Jelena Milic and Jelena Vasiljevic[43])

Serbia case study objectives

CIHEAM-IAMB worked in close collaboration with MAEP (Ministry of Agriculture and Environmental Protection) on producing a first organic statistics report for Serbia and in particular, the two organisations joined forces to:

- Draw up the current state-of-the-art of the organic data collection in Serbia;
- Collect and classify the production (area and volume) data for 2012 by type of crop and animal, as well as the number of operators according to the Eurostat categories;
- Calculate national average yields for selected organic crops, with reference to 2012/2013 organic land use data;
- Cross-check, for selected crops, the production volumes estimated by CBs with those calculated on the basis of the national average yields and land area;
- Compare and analyse data on international trade (export volumes and values, and country of destination) from the two available sources: CBs and customs.

Production area and volume data

MAEP filled in the Eurostat format with the 2012 crop area, and crop and livestock volume data received from CBs.

MAEP calculated production volumes for three selected crops and cross-checked them with data communicated by CBs. The exercise showed large differences between the calculated figures and those communicated by CBs in their annual report, which raised the question at MAEP to further investigate the data discrepancies with CBs.

What additional data were collected?

No additional data were collected. MAEP carried out a cross-check between the production volumes communicated by the CBs and those computed with reference to national average yields and production areas of three selected crops. The selected crops were corn, soybeans and raspberries. Corn and soybeans were chosen as they represent the largest organic crop areas and raspberries for being the most exported product.

How data were collected?

Data were collected from authorised CBs operating in the country.

What costs have been incurred (direct costs and time input)?

MAEP invested time in inputting the received production data from the authorised CBs into the Eurostat format, and in calculating and cross-checking the production volumes of the three selected crops.

[43] Ministry of Agriculture and Environmental Protection, Serbia.

Have stakeholder expectations been met?

Does not apply to our case.

International trade data

MAEP already had data on export volumes and values from authorised CBs, and collected data available at the customs. A cross-check of the two datasets on exports volumes and values was done, and inconsistencies were identified. Further investigation will be carried out by MAEP to resolve the observed inconsistencies.

What additional data were collected?

MAEP collected export data from customs and collated them with the data communicated by the authorised CBs through the annual report. Discrepancies and inconsistencies were identified.

How data were collected?

Data were collected directly from customs and from the mandatory annual report delivered by the authorised CBs to MAEP.

What costs have been incurred (direct costs and time input)?

MAEP invested time in collecting data on exports from customs and in comparing the datasets from the two sources. The efforts invested were worthwhile since the data comparison allowed identification of discrepancies.

Have stakeholder expectations been met?

Does not apply to our case.

Area of improvement: Serbia case study achievements

Based on the identified gaps and issues in the Serbian organic market data collection, the following activities were carried out as part of Serbia case study:

- Producing a first report on the status quo of the data collection system of organic products in Serbia,
- Raising awareness of the competent authority about the importance and relevance of:
    - collecting and storing data according to international classification, in our particular case, the use of the Eurostat classifications for land area and product volumes,
    - analysing and evaluating the quality of the available data,
- Computing the average national organic yields of selected crops,
- Cross-checking production volume data communicated by authorised CBs with those computed based on the national average yields and cultivated areas (for selected crops only),
- Cross-checking organic export data from authorised CBs with those available at customs,
- Better exploitation of existing data especially for production and export data,
- Strengthening of national and international dialogue. At the national level, MAEP and customs started exchanging and cross-checking their data. The resulting identification of discrepancies

and inconsistencies in export data led MAEP and Serbian customs to express an interest in meeting Italian institutions - The Italian Ministry of Agricultural, Food and Forestry Policies and the Italian customs, who have recently adopted a specific code for organic imports of selected strategic crops - for an experience-sharing visit.

Are the methods for data collection transferable to other countries?

Serbia is an EU candidate country that already set off a series of improvements for all its legislative and functional systems to meet the EU requirements and standards. The harmonisation of the national organic legislation with the Council Regulation (EC) No 834/2007 and its implementation are part of these changes. This upgrading leads Serbia to be at an advanced stage compared to the other MOAN countries included in the case study. However, the methods used for the Serbia case study may well be transferable to the other MOAN countries as well as other countries.

The case study of Serbia demonstrated that institutional dialogue at national and international level between different institutions involved in the data collection could help in finding applicable and practical solutions to existing problems of data collection. Exchanging ideas and sharing experiences are the best way in all contexts to improve the data collection system.

Cross-checking exiting data from different sources was demonstrated to be a valid solution to identify inconsistencies. Moreover, cross-checking requires harmonised data classification; therefore it triggers the harmonisation of the datasets, when necessary, making data comparison feasible.

Other useful information to come out of the case study experience

Conducting the case study in Serbia set off a series of changes in considering the organic statistics at MAEP level. It also helped in identifying the sensitive data to be collected, opening the path to further considering confidentiality issues, especially for import and export values, as well as prices at farm level. The Serbia case study experience particularly led to:

- Building up strategic thinking through the data collection system improvement and uses of the data collected,
- Fruitful and effective interaction of the different institutions involved in the organic data collection (MAEP, CBs and customs),
- Result-oriented exercises on yield calculations and cross-checking of production volumes and exports,
- Interest stimulated in learning more about other national experiences and learning from further national and international exchange.

Recommendation to improve data quality in the future

The Serbian case study showed that it is essential to:

- Continue to use international classification; the Eurostat categories could be used mainly for production areas and volumes, as Serbia is a Candidate country to EU and has already started off unifying all its Laws and practices accordingly,
- Continue with cross-checking production data volumes and extend it to a larger number of crops,
- Continue cross-checking the export data from the CBs and the customs to monitor the export flow over the years,

- Fill the data gaps related to international trade and domestic market values, and prices at farm level; the confidentiality and privacy issues that inhibit the communication of these data should be carefully examined.

Suggestion for a code of practice on organic market data collection

See suggestions in Lebanon report.

Albania (country report prepared by Fatmira Allmuça[44] and Sokol Stafa[45])

Albania Case Study objectives

CIHEAM-IAMB worked in close collaboration with the MOAN's country representative and a national expert to achieve the following objectives:

- produce an updated report on the current state-of-the-art of the organic data collection in Albania;
- collect and classify 2012 production data (crop area and volumes) and operator numbers available from different sources, according to Eurostat (organic questionnaire) categories;
- compare data on average yields for selected organic crops based on experts' estimates with national conventional yields for the same crops.

Production area and volume data

The national expert in charge of gathering and veryfying available data on production area and volumes and operator numbers and of compiling the Eurostat questionnaire, individually contacted various stakeholders operating in the Albanian organic sector. These data collectors and holders included: MARDWA, CBs, single organic operators, as well as national organisations and associations like the Institute of Organic Agriculture (IOA), BioAdria Association, and the Albanian Association of Marketing (AAM).

What additional data were collected? / How data were collected?

2012 data on organic production areas and volumes and operator number were all collected *ex novo* from the above mentioned organisations, double checked with data collected by MARDWA and entered into the Eurostat questionnaire format.

Plausibility checks on yields were conducted relying on data on organic yields previously collected in the framework of a recent project by two national experts from IOA for seven selected crops: potatoes, oil olives, vineyards (for table grapes and for wine) and the following crops grown under greenhouse: cherry tomatoes, tomatoes and pepper. These organic yield estimates were compared with national average conventional yields published in the 2011 MARDWA statistical yearbook (the 2012 edition of the statistical yearbook had not been published at the time of the work).

What costs have been incurred? (direct costs and time input)

Direct costs incurred were due to engaging a local expert with professional contacts with the main stakeholders who could provide access to existing organic data. The data collection from the different stakeholders proved to be quite time consuming.

Have stakeholder expectations been met?

n.a.

Comparability

The introduction of the Eurostat questionnaire, especially if it continues to be used in the future by the national data collectors and holders, could be seen as a first step towards the harmonization of the

[44] Ministry of Agriculture, Rural development and Water administration (MARDWA)
[45] Albinspekt

different classifications currently used in organic data collection and dissemination, which could eventually improve the comparability of Albanian data.

Area of improvement: Albania Case Study achievements

The case study activities achieved the following outcomes:

- Production of an updated report on the *status quo* of the organic data collection system in Albania.
- Introduction of an international classification (Eurostat organic questionnaire version 2012) to collect and disseminate data on production area and volumes and operator numbers from different sources.
- Implementation of plausibility checks on organic yields for selected crops, through comparison of expert estimates of organic yields with conventional yields published in the MARDWA statistical yearbook;
- Raising awareness with different stakeholders about the importance of producing and disseminating accurate and consistent data on the sector, especially at the international level.
- Strengthening the institutional dialogue and collaboration on organic statistics at the national level and contributing to integrate some relevant Albanian stakeholders into the international debate about better organic data collection.

Are the methods for data collection transferable to other countries

In Albania only limited and fragmented data exist on the organic sector, the system of data collection is not yet completely established. Therefore, collecting and storing production data according to an international classification such as the Eurostat classification could be a recommended step to take in a similar context where no internationally accepted classification is yet adopted.

Cross-checking existing data from different sources also showed to be a valid solution to identify inconsistencies. Such a time-consuming and complex process always proves to be important, in every context, to raise awareness about the need to invest in the quality of organic data for an effective development of the sector.

Other useful information to come out of the case study experience

n.a.

Recommendation to improve data quality in the future

- Establish a **task force**, gathering the main stakeholders involved in organic data collection with MARDWA taking the lead in coordinating the process of data collection.
- Contacts made for this case study showed that CBs, single operators and MARDWA are at present the main and the most reliable data holders but it would also be important to integrate into such a process the other organisations and institutions operating in the organic sector.
- Regularly cross-check the data available from the different sources to identify inconsistencies and critical issues and make arrangements to produce more reliable and accurate data.

- Continue using the Eurostat questionnaire to collect and store data on organic land area, volumes and operator numbers and advise all data collectors to do so in order to have harmonised datasets to be integrated and compared.
- If needed, adapt the Eurostat format to Albanian needs for some products.
- Continue and expand the monitoring of the annual evolution of yields/volumes in order to analyse the trends in organic production at the national level, and to make useful comparisons with conventional agriculture as well as with the organic performance observed for the same crops in neighbouring countries.
- Start tracking organic exports in collaboration with the national Institute of Statistics (INSTAT) and customs by introducing an identification code for organic exports at customs level.
- Organise and support efforts to publish accurate and reliable organic data in order to be able to monitor the evolution of the sector and possibly implement new actions to develop it.

Suggestion for a code of practice on organic market data collection

- Have a clear and detailed description of data collection and analysis methods.
- This is fundamental for those who are starting to build a system of data collection for organic data or need to improve and expand it (most MOAN non-EU countries). The MOAN case study showed that the description of the data collection and analysis methods should cover all types of data starting from production areas and volumes to the prices and market volumes and values data. It is essential that the description gives clear indications of:
    - the source of data (expert estimate, calculation) and how it was obtained,
    - the representativeness of the data collected,
    - the data checks carried out (e.g. comparison with previous years' data and investigation of unusual year-on-year variations and/or between datasets).
- Advise the carrying out of cross checks. MOAN case study adopted this approach to identify and determine inconsistencies between available datasets.
- The use of a trusted third party to collate and analyse data may allow greater access to data by enabling local authorities to upgrade and consolidate their data collection system. The role of the "trusted third party" could be effectively played by international organisations (e.g. CIHEAM-IAMB) and institutional networks (e.g. MOAN) that are seen as qualified to assist such an exercise as well as being perceived as neutral and unbiased since they essentially serve institutional interests and operate to achieve shared strategic objectives.
- Support institutional dialogue at national and inter-countries level.

Tunisia (country report by Samia Maamer[46])

Tunisia Case Study objectives

CIHEAM-IAMB worked in close collaboration with DGAB through the MOAN representative, on elaborating a first organic statistics report for Tunisia and in particular to:

- report on the current state-of-the-art of the organic data collection;
- classify production area and volumes data for 2012 by type of crop and animal as well as the number of operators according to Eurostat categories (using the Eurostat organic farming questionnaire);
- reorganise the presentation of 2012 organic export data (values) by product and country of destination.

Production area and volume data

Available organic statistics for land area, number of operators and production volumes have been used to compile the EUROSTAT questionnaire on organic farming (Final Harmonized Questionnaire 2012).

What additional data were collected?

No additional data were collected. The available data were harmonised with the Eurostat classification.

How data were collected?

Data were provided by DGAB based on the CBs communications and reports.

What costs have been incurred? (direct costs and time input)

A national expert has been hired to work on the information and data targeted for the case study.

Have stakeholder expectations been met?

n.a.

Comparability

The use of the EUROSTAT questionnaire has provided a further opportunity to test and enhance the comparability of Tunisian organic statistics.

International trade data

Export volumes and values

Available data on 2012 organic export values were reorganised to be presented in a more detailed way, more specifically disaggregated by product and country of destination.

What additional data were collected?

No additional data were collected.

What costs have been incurred? (direct costs and time input)

A national expert has been hired to work on the information and data targeted for the case study.

[46] Ministry of Agriculture, DGAB

Have stakeholder expectations been met?

n.a.

Comparability

The disaggregation of export data by product and country of destination enhanced the comparability of available data. The exercise could be carried out only for export values data, since the simultaneous publication of export volume data (although they are available) in such a disaggregated way was judged sensitive by national institutions for its potential commercial strategic implications.

Area of improvement: the Tunisian Case Study achievements

Conducting the case study in Tunisia allowed to:

- produce an updated and comprehensive report on the status quo of the organic data collection system in the country;
- test the use of Eurostat organic questionnaire nomenclature to compile production and operators data;
- produce a more detailed presentation of available export (value) data by specifying the product type and the country of destination.

Are the methods for data collection transferable to other countries

The exercise carried out in Tunisia is easily replicable in other countries, especially in many Southern and Eastern Mediterranean countries where the setting of a national organic data collection system is still underway and the use of international classifications as well as a more detailed presentation of available data would contribute to enhance the visibility of national organic sectors and provide useful information to support their further development.

Other useful information to come out of the case study experience

- The production of the state-of-the-art report on organic data collection systems provided a timely occasion to gather a comprehensive overview of existing data and data sources on the organic sector as well as on the possibilities for further analysis of such data.
- Despite the willingness and the interest of the country to contribute with its national data to the international databases on organic agriculture, no “real and concrete” benefit has been so far identified from such a contribution. Those market information and data on EU organic markets that could be interesting for Tunisian exports are not always available and, when they are, they are not free of charge. No true and fair exchange of organic market information has been possible so far.
- With regard to the compilation of the EUROSTAT organic questionnaire with Tunisian organic production and operators data for 2012 the following specific issues have been identified:
    - Missing specific codes for some organic crops of special relevance in Tunisia, as well as in other Southern Mediterranean countries (i.e. dates, pomegranates, prickly pears, pistachios, jojoba)
    - Differences in some crop classifications i.e. in EUROSTAT potatoes are classified as “rootcrops” while in Tunisia they are included in the “vegetables” category.
    - Missing codes for some by-products (hay, straw, cladodes of prickly pears).

- Concerning the specific indicator "total harvested production/quantity estimation": *i)* no detailed indication is given in the template with reference to "quantity estimation" (definition, period to be considered, etc.); *ii)* for many crops such data may not be easily available; *iii)* the relevance and usefulness of such data remains unclear especially considering the effort needed to collect them. It would be better to concentrate such effort only on the collection of actual (as opposed to estimated) annual production data.
- As also mentioned in EC Reg. No. 543/2009, data to be collected and reported in organic statistics should take into account specific country conditions. In relation to that, there is a further need for precision and a requirement for it to be more country-specific.

Recommendations to improve data availability and quality in the future

Alongside the issues addressed through the case study exercise, the following recommendations could be formulated:

- it would useful for DGAB to launch a national project to monitor organic production costs and prices at farm level in collaboration with other relevant institutions, like the *Union Tunisienne de l'Agriculture et de la Pêche* (UTAP). This could contribute to DGAB's tasks, e.g. to help operators to access the market by providing useful market information on the sector's facts, figures and trends;
- it would be equally useful to establish an information system to regularly monitor retail prices of organic products on the local market. Considering the early stage of development of the Tunisian organic local market, this should not require a huge amount of resources, at least at the beginning;
- in more general terms, it would be important to establish a national information system to contribute to a coherent and coordinated collection and dissemination of all available information and data on organic agriculture at the national and local level;
- it is now crucial to further progress in the development of the "*Manage Bio*" database, especially tackling the traceability issue. The implementation of a traceability system for organic products has been already foreseen and needs now to be concretely realised. A first, important step to be achieved in the short-term is the establishment of a traceability system for the producers of the two main organic crops in Tunisia: olives and dates. Some tests are already underway. Specific technical assistance and training will then be provided to support CBs and supply chain operators in the usage of the established system. Also, in the medium-term, a communication system allowing a regular, real-time flux of data between the DGAB and CBs need to be created.
- it could be convenient to introduce a specific coding for organic products at customs level to monitor organic imports;
- finally, dissemination of available organic data needs to be improved though the production and circulation of brochures and booklets. Also, a more sophisticated and targeted level of analysis of existing data, for example focusing on specific organic supply chains, would greatly contribute to: *i)* make planning and decision-making more effective for the development of the organic sector; *ii)* better orient choices and investments in national organic research; *iii)* improve market development opportunities for Tunisian organic products, especially for export.

Suggestion for a code of practice on organic market data collection

- Have a clear and detailed description of data collection and analysis methods.
- This is fundamental for those who are starting to build a system of data collection for organic or need to improve and expand it (most MOAN non-EU countries). The MOAN case study showed that the description of the data collection and analysis methods should cover all types of data starting from production areas and volumes to the prices and market volume and values data. Therefore, it is essential that the description clearly indicates:
    - the source of data (expert estimation, calculation) and how it was obtained,
    - the representativeness of the data collected,
    - the data checks carried out (e.g. comparison with previous years' data and investigation of unusual year-on-year variations and/or between datasets).
- Advise the carrying out of cross checks. The MOAN case study adopted this approach to identify and determine inconsistencies between available data.
- The use of a trusted third party to collate and analyse data may allow greater access to data by enabling local authorities to upgrade and consolidate their data collection system. The role of the "trusted third party" could be effectively played by international organisations (e.g. CIHEAM-IAMB) and institutional networks (e.g. MOAN) that are seen as qualified to assist such an exercise as well as being perceived as neutral and unbiased since they essentially serve institutional interests and operate to achieve shared strategic objectives
- Support institutional dialogue at national and inter-countries level.

Morocco (Note by Marie Reine Bteich and Patrizia Pugliese[47])

In the case of Morocco, unfortunately, formal institutional agreements needed to carry out the case study could only be reached late. After months of intensive negotiations between CIHEAM Bari and the official data collector/holder institutions the latest Moroccan statistics became available in late summer 2014 and CIHEAM Bari was authorised to publish them. This led to the inclusion of an additional chapter on Morocco in the MOAN Report of 2014.

These circumstances made it impossible to produce a more detailed report on the case study activities in Morocco within the in the time frame of the project, as was done for the other countries.

The available data on organic agriculture in Morocco that were published in the MOAN Report 2014 are:

- Organic production area (hectares) collected by the Ministère de l'Agriculture et de la Pêche Maritime (MAPM) (Ministry of Agriculture and Maritime Fisheries).
- Number of organic operators (n) collected by the Ministère de l'Agriculture et de la Pêche Maritime (MAPM) (Ministry of Agriculture and Maritime Fisheries).
- Export volumes (tons) and values (EUR) by country of destination collected by the Etablissement Autonome de Contrôle et Coordination des Exportations (EACCE).

[47] CIHEAM Italy

Appendix D: Overview of data collection systems for import data in Europe (by Helga Willer[48] and Diana Schaack[49])

Czech Republic

Michal Lošťák[50] and Jakub Husák [51]

Import data based on import authorisations

The study on import data based on import authorisations was carried out for the first time for the 2012 data. It was initiated by the Czech partner of the OrganicDataNetwork project as part of the case study on the Czech Republic.

Table D 1: Import data based on import authorisations – Czech Republic.

Institution in charge	Ministry of Agriculture: Data from control bodies based on import authorisations
Source for data	Import authorisations are issued by the Ministry of Agriculture, based on EU regulation 1235/2008 (changed in 2013 (586/2013). The authorisations are based on the notifications of the importers (Importers notify the control bodies about all products that are imported)
Data collected (indicator, product level)	Quantity (kg, litres, tonnes): totals and breakdown by product (group) Name of producers Country of production/origin Name of importer Detailed product level, product grouped during recording for the report by UZEI (IEAI) by CPA classification Name of control bodies Only countries that are not in the EU and not under the equivalence scheme
Method	For method see also EU regulation 1235/2008 (changed in 2013 (586/2013). The data are available in disaggregated form through the import authorisations. Each imported product has its own record. It is necessary to go through all of these authorisations and aggregate and categorize the data using the CPA classification. This means that every individual imported product must be recoded and the product must be categorized into the CPA classification. The recoding work is sometimes quite complicated and time consuming. Recoding must be done in the country of import because the language of destination of origin is used in the authorisation document.
Tools (data collection, data processing/storage, classification used)	Transfer data from control bodies (or from Ministry of Agriculture) to an excel sheet using the CPA classification.
Sample size/coverage	All imports from non EU countries, which are not under the equivalence scheme.

[48] Helga Willer, Research Institute of Organic Agriculture (FiBL), Frick, Switzerland, www.fibl.org
[49] Diana Schaack, Agricultural Information Company (AMI), Bonn, Germany, www.ami-informiert.de
[50] Michal Lošťák, Czech University of Life Sciences Prague (CULS) – Faculty of Economics and Management, Prague, Czech Republic, http://www.csz.cz
[51] Jakub Husak., Czech University of Life Sciences Prague (CULS) – Faculty of Economics and Management, Prague, Czech Republic, http://www.csz.cz

Voluntary/compulsory	Import authorisations are compulsory for the importers. Data collection of these data is not compulsory.
Legal base	None for the data analysis, although the authorisations themselves are required by law.
Availability	Data were collected for the first time in 2012 (using the series of authorisations from 2006-2012) and are not yet publically available (authorisations are available upon request to the Ministry of Agriculture)
Frequency of data collection	The idea is to carry out this data collection every year
Advantages	Full coverage of the imports from the countries not listed in the list of the third countries (the list is changing) according to EC regulation 1235/2008 (and 586/2013). The data are useful for cross-checking with other data and provide detailed information about the imports from these third countries; the data are more detailed than those received from the importers through the questionnaires disseminated by UZEI (IAEI).
Disadvantages	Not complete as they do not cover all imports (only third countries not listed in the list of countries under the equivalence scheme), and it takes a lot of time to process the data from the authorisations.
Reasons why method is chosen	The reason why this method was chosen is because of OrganicDataNetwork. The idea behind it was to have a new type of data for the imports (and exports) which were not published before. Although this survey covers only the data from the third countries not listed in the compliance list (EC Regulation 1235/2008), the data can be used for data quality checks against exiting data from statistical surveys among importers.
Lessons learnt	The process of recoding the products was time consuming; data were available from 2006 and not processed (new source of data was discovered); it was possible to carry out quality checks immediately (e.g. checking suspicious data about import of pomegranate juice against total juice consumption, but it was not possible to contact the import company to provide a detailed explanation).
Links	Statistical report on organic agriculture by UZEI; available at http://eagri.cz/public/web/file/306458/Zprava_o_trhu_s_biopotravinami_za_rok_2012_final.pdf

Import data from importers

Table D 2: Import data from importers – Czech Republic

Institution in charge	UZEI (IAEI in English)
Source for data	Importers (retailers, distributors or processors) are sent annual questionnaires. The respondents are identified based on the publically available list of all importers (distributors, processors and retailers) of organic products.
Data collected (indicator, product level)	Value of products and product groups in Czech Koruna (CZK).
Method	Questionnaire is sent to all operators (actors in organic markets – retailers, distributors and processors – to estimate the value of their imports) ; the questionnaire is not only for imports but also for exports, the domestic market (retailers, distributors) or processing (e.g. what is the share of imported organic products used in food processing).
Tools (data collection, data processing/storage,	There is a questionnaire for distributers, including wholesalers, (71% response rate – 118 respondents but 51 out of them are not involved in distribution) and one for processors (69% response rate – 341 but 47% of them state that they are not involved

classification used)	in processing), distributors and processors in one company (63 % return rate) and for 12 retailer chains. All are asked about the imports (value in CZK). Questionnaire does not only relate to imports but also to other activities. The data from the previous year are used if no new data are sent (estimate is used).
Sample size/coverage	70% of total
Voluntary/compulsory	Voluntary
Legal base	No law
Availability	Yearbook (annual report) and data excerpts for individual requests.
Frequency of data collection	Annually
Advantages	Possibility to approach all actors importing organic foods.
Disadvantages	It is not compulsory to respond. Data are not complete, for packaged products it is not always clear how much is actually Czech production (so it is hard to say what the share is of imports in the Czech Republic). Because not all data are available (not 100% response rate from those who are active in the imports), the share of the imports on the Czech market is difficult to estimate.
Reasons why method is chosen	Only way that the data can be obtained.
Lessons learnt	Expand survey of farmers markets, there are organisers for these markets to whom these questionnaires could be distributed
Links	http://eagri.cz/public/web/file/306458/Zprava_o_trhu_s_biopotravinami_za_rok_2012_final.pdf

Imports of organic foods from non-EU member states (so-called third countries) were regulated until 2012 by the EC Regulations (EC) 1235/2008 (until Dec 31, 2008 the Council Regulations (EEC) 2092/91 on organic farming was in force in which article 11.6 required Ministries for Agriculture to issue "import authorisations" for imports from third countries; from January 1, 2009 a new EU legislation became valid – EC Regulation (EC) No. 834/2007).

Denmark

External trade of organic products

Table D 3: External trade of organic products - Denmark

Institution in charge	Statistics Denmark. Food Industries.
Purpose	To give information on the magnitude and composition of the turnover of organic foods in external trade. The survey was conducted for the first time for the year 2003.
Source for data	Information from establishments that have been certified to trade with organic products, and at the same time have had foreign trade with potential organic products. There are 3 registers which form the basis for the survey on external trade of organic products: a) The Danish AgroFish Agency (previously the Danish Plant Directorate, which since the middle of 2011 is part of Danish AgroFish Agency) register of authorised farms and establishments,

	b) The Danish Veterinary and Food Administrations register of authorised establishments, c) and Statistics Denmark's register of external trade. Statistics on Denmark's external trade are compiled monthly by Statistics Denmark. There are two systems: trade with EU countries and trade with third countries.
Users and Application	EU and various organisations and ministries.
Data collected (indicator, product level)	Commodity code in accordance with the Combined Nomenclature (CN) Partner country (imports = country of dispatch/country of origin, exports = country of destination) Type of transaction Invoiced value in DKK Net weight in kg and/or supplementary unit, e.g. litre, piece.
Method	Statistics on Denmark's external trade are compiled monthly by Statistics Denmark. There are two systems: trade with EU countries and trade with third countries. Data on trade between Denmark and the other EU countries are prepared on the basis of data reported by Danish establishments whose total annual imports of goods exceeded DKK 3.5 million in 2012 and/or whose exports of goods exceeded DKK 5.0 million. Monthly data are reported by approximately 8,000 establishments. Statistics on trade between Denmark and non-EU countries are compiled on the basis of data reported to the Danish Central Customs and Tax Administration in connection with imports and exports of goods to/from place/country-region in Denmark and from/to third countries. The coverage of the statistics is complete, as all transactions must be reported. In the case of smaller transactions under the statistical threshold (DKK 7.5000 and 1.000 kg), a simplified reporting can be applied.
Tools (data collection, data processing/storage, classification used)	
Sample size/coverage	Establishments certified to trade in organic products and that at the same time have had foreign trade in potential organic products. From 2010, a threshold has been introduced to exclude traders with very limited potential organic trade. The threshold has almost no impact on figures for total trade in organic products. In 2011 and 2012, the threshold was 250,000 Danish Krone (DKK) for trade with goods which can be organic.
Voluntary/compulsory	Compulsory
Legal base	Act on Statistics Denmark.
Availability	Publically available at the STATBANK website (by crop/product, value, total value by supplying country).
Frequency of data collection	Monthly
Advantages	Almost complete coverage of Denmark's exports and imports
Disadvantages	Companies under a certain economic threshold are excluded
Reasons why method is chosen	
Lessons learnt	
Links	www.dst.dk/en/Statistik/dokumentation/Declarations/external-trade-of-organic-products
Contact	Agnete Nilsson, Statistics Denmark

France

Nathalie Rison Alabert[52]

Since 2005 Agence Bio has conducted annual surveys of operators to estimate the French organic market and imports of organic products in the broad sense (imports from third countries and from Member states). From 2012, thanks to the national codes in use and data collected by the French customs, it is possible to get statistics on imported organic products.

Table D 4: Customs data - France

Institution in charge	French customs (Ministry of economy and finances DGDDI)
Source for data	Data based on import declarations using the Single Administrative Document (SAD), which is the documentary basis for customs declarations in the EU and in Switzerland , Norway and Iceland.
Data collected (indicator, product level)	Production volume in kg; Production value in euro All organic products Breakdown by country
Method	In France, where an organic product is concerned, the importer must indicate in box 44 (Additional information/Documents produced/ Certificates and authorizations) of the SAD the national additional code R058 dedicated to organic products. This code is linked to the French document code 2015 (equivalent of the C644 in use in some countries) identifying the organic import certificate which must, according to EC regulation 1235/2008, be validated by the French customs if the product is to be sold as organic on the European market.
Tools (data collection, data processing/storage, classification used)	Data come in an Excel-sheet from the DGDDI. The classification used is the combined nomenclature (8 digits, common to all EC countries).
Sample size/coverage	All French importers of organic products and all third countries.
Voluntary/compulsory	Compulsory for all imports from third countries.
Legal base	EC regulation 1235/2008
Availability	Data available only with the consent of the Ministry of agriculture and the French customs; no public information yet but part of the OrganicDataNetwork project.
Frequency of data collection	Continuously, annual compilation, could be also monthly.
Advantages	Precise knowledge of direct imports in volume and value.
Disadvantages	Import through other EC countries is more important in France than direct import, therefore overall import data is still necessary.
Reasons why method is chosen	Customs data will allow a more detailed and better estimate of overall imports.
Lessons learnt	Special codes for identifying organic imports are also used in other countries and could be more widespread.
Links	http://agriculture.gouv.fr/Les-importations-de-produits-issus http://www.agencebio.org/importer-des-produits-bio http://www.agencebio.org/la-bio-en-france

[52] Agence Bio, France

Germany

Diana Schaack[53]

In Germany, data on imports (business year 2009/10) were first collected in 2010 as part of a project of the Federal Organic Farming Scheme and other forms of Sustainable Agriculture (BOELN), which is funded by the German Ministry of Agriculture. Data collection was carried out by the Agrarmarkt Informations-Gesellschaft (AMI) in collaboration with the Research Institute of Organic Agriculture (FiBL), fleXinfo and Agromilagro Research. In 2013, data were collected for the business years 2010/11 and 2011/12, again funded under BOELN and the survey will be continued by AMI on behalf of the German Ministry of Agriculture for at least the next three years. For the BOELN study, a piecemeal approach was chosen, based on a number of sources as outlined below (customs data, survey among importers, foreign trade statistics, household panel data, and estimate of production).

Customs data

Table D 5: Customs data - Germany

Institution in charge	German customs
Source for data	Data from customs, based on import authorisations.
Data collected (indicator, product level)	Production volume in metric tonnes All products
Method	Import authorisations based on certifiers' certificates are used by customs to check that an authorisation has been granted for a certain import volume. The customs do not check the quantities that have actually been imported.
Tools (data collection, data processing/storage, classification used)	
Sample size/coverage	100 % of all third countries.
Voluntary/compulsory	Compulsory for all importers from countries outside the EU.
Legal base	
Availability	Information on the import authorisations is available only with the consent of the Ministry of the Interior and from its office for information processing and technology, ZIVIT.
Frequency of data collection	Annually, could also be monthly.
Advantages	
Disadvantages	Authorisations do not reflect exact import volumes as companies always apply for higher volumes than are effectively delivered. Therefore import authorisations always show higher volumes. On the other hand, due to intra-EU trade, it is not possible to see what amounts entered Germany through other EU countries.
Reasons why method is chosen	Because of these disadvantages, AMI decided not to use customs data.
Lessons learnt	See disadvantages: customs data are not really a good source of information for import data.
Links	http://orgprints.org/19899/; www.organic-world.net/news-organic-world.html?&tx_ttnews%5Btt_news%5D=619&cHash=8f645b97885158d8d7746fc598533fc2

[53] AMI, Germany

Survey among importers

Table D 6: Survey among importers - Germany

Institution in charge	A survey among registered organic importers is not carried out regularly yet. So far, it has been carried out twice in the framework of the above mentioned BOELN54 project. From 2014 onwards, the survey will be carried out regularly for at least 3 years on behalf of the Ministry of Agriculture.
Source for data	Company information. However, there is no list of importers (confidentiality), only their number is known. So only those importers that are known to AMI and partners, and that are important for the investigated products, are included. These were about one third of all importers. Of those that were contacted, only about one third replied to the survey. AMI tried to contact the most important ones and concentrated on selected products (fresh produce and raw material) that can also be produced in Germany or are a direct competition to products that can be produced in Germany (e.g. bananas).
Data collected (indicator, product level)	Import volumes in metric tonnes, fresh produce (apples, bananas, several vegetables, potatoes, cereals, oil seeds, protein crops, eggs, pork, milk and dairy).
Method	Written and telephone survey of importers.
Tools (data collection, data processing/storage, classification used)	Data collection in a database, imports data from excel spreadsheet questionnaires, classification according to Eurostat production codes.
Sample size/coverage	The AMI survey covers about one third of all importers (see under source of data).
Voluntary/compulsory	The release of information to AMI and the data collection is voluntary.
Legal base	The survey is carried out on behalf of the Ministry of Agriculture, but it is voluntary for the import companies.
Availability	Available in the final reports of the aforementioned BOELN projects.
Frequency of data collection	Irregular (data collection so far was carried out for the years 2009-2012). Currently, data collection depends on contracts between BLE (Federal Office for Agriculture and Food) and AMI (or another institution) and whether activities are carried out or not.
Advantages	Detailed data, in-depth insight .
Disadvantages	Data incomplete, time-consuming data collection process.
Reasons why method is chosen	This method was chosen by AMI to complement the data from the other sources.
Lessons learnt	Company data are a good source in principle, but due to the fact that it is not possible to cover all companies, gaps in data are a challenge.
Links	orgprints.org/19899; www.organic-world.net/news-organic-world.html?&tx_ttnews%5Btt_news%5D=619

Foreign trade statistics

Table D 7: Foreign trade statistics - Germany

Institution in charge	Federal Statistical Office

[54] Federal Organic Farming Scheme and other forms of Sustainable Agriculture (BOELN)

Source for data	Company data, have to be delivered to the Federal Statistical Office (Bundesamt für Statistik); no distinction between organic and non-organic.
Data collected (indicator, product level)	Production volumes in metric tonnes, product level.
Method	Company data are delivered to the foreign trade statistics by every company that imports goods for more than EUR 500,000 per year. As there is no trade code for organic data, these had to be extracted, based on information regarding whether a company is dealing with organic products. Only the data of companies that are specialised in organic products could be used. For these data, the companies had to be asked if they agreed that their data be used. AMI, in the frame of the aforementioned BOELN project, got access to the information about how much of which product proportions these companies import from EU countries and countries outside the EU.
Tools (data collection, data processing/storage, classification used)	Data come in an Excel spreadsheet from the Statistical Office and are imported into the same database as the survey data.
Sample size/coverage	All trade companies in Germany. For the organic extract, only the data of the 100% organic companies. With regards to the data of the companies that are engaged both in organic and in conventional imports, it is not possible to extract the organic data.
Voluntary/compulsory	Voluntary for the companies to agree to the use of their data but compulsory to deliver their data to the Statistical Office.
Legal base	Federal law on statistics (Bundesstatistikgesetz).
Availability	The foreign trade statistics are publically available, the organic data only on request.
Frequency of data collection	For all data: monthly; for organic data: Irregularly, depending on research projects or order of ministry, and only for companies that only import organic goods.
Advantages	In depth insight, data in database format, less time consuming for the companies
Disadvantages	Can only be used for specialized organic companies, this is why data are incomplete.
Reasons why method is chosen	To complement data from other sources.
Lessons learnt	In theory, this is the best method. If data was differentiated between organic and non-organic either by different organic codes or an additional indicator, this would be the easiest solution for getting organic import data. Then easy data excerpts could be made even monthly and could also be used for fraud prevention.
Links	orgprints.org/19899; www.organic-world.net/news-organic-world.html?&tx_ttnews%5Btt_news%5D=619&cHash=8f645b97885158d8d7746fc598533fc2

GfK-household panel data

Table D 8: GfK household panel data - Germany

Institution in charge	AMI, based on GfK household panel data.
Source for data	GfK household panel data – a sample of 13,000, from 30,000 households in Germany scanning all their purchases.
Data collected (indicator,	For fruits, vegetables, potatoes, and eggs, retailers have to mark the origin of

product level)	products in the shops, and households scan the country of origin; data collected – sales volume, sales value.
Method	For household panel data, households select country of origin in a list of countries adapted to the individual product.
Tools (data collection, data processing/storage, classification used)	AMI has access to an analysing tool for GfK household panel data, and can analyse monthly data on import volumes.
Sample size/coverage	Household panel with 13,000 from a pool of 30,000 households.
Voluntary/compulsory	Voluntary for the households.
Legal base	
Availability	Available for AMI within a GfK-AMI contract, at a cost.
Frequency of data collection	Monthly
Advantages	Regular deep insight.
Disadvantages	Coverage of all products not known and has to be newly defined.
Reasons why method is chosen	Deep insight.
Lessons learnt	Household panel data can be used for estimating imports but it must be considered that it only shows household purchases, and is not 100% representative – no catering, no market losses, and no production losses – but it gives a good picture of market evolution and overall imports can be estimated. Most based on estimates; lack of data on exports and on export destinations
Links	orgprints.org/19899; www.organic-world.net/news-organic-world.html?&tx_ttnews%5Btt_news%5D=619&cHash=8f645b97885158d8d7746fc598533fc2

Estimate of production in the exporting countries

Table D 9: Estimate of production - Germany

Institution in charge	AMI, based on FiBL data and FiBL estimates.
Source for data	Area data from which potential production is estimated, real data from national sources.
Data collected (indicator, product level)	All products, breakdown by production, volume in metric tonnes.
Method	Data collected by FiBL through its annual survey on organic agriculture worldwide are used. If export and production data are available these are used; in most cases the production is calculated using FAO yield data (70% or 80% of yields provided by FAO).
Tools (data collection, data processing/storage, classification used)	Questionnaire for survey, data storage in the FiBL BioGlobal database, calculation of production via Excel.
Sample size/coverage	Estimates based on FAO yields and assumptions on organic yields; real national data calculated/collected with different methods.
Voluntary/compulsory	Voluntary (compulsory for production data in the EU-28 countries).
Legal base	
Availability	Area data available for more than 160 countries (from FiBL), based on national statistics; and from which production can be calculated.
Frequency of data collection	Annual (FiBL).
Advantages	Fairly good global coverage.

Disadvantages	Very few real production data are available; the basis for the calculation of production is not good as yield data are scarce.
Reasons why method is chosen	No alternative.
Lessons learnt	Most based on estimates; lack of data on exports and on export destinations. There is a major need for more data, or at least for better data, on organic yields for individual countries.
Links	orgprints.org/19899; www.organic-world.net/news-organic-world.html?&tx_ttnews%5Btt_news%5D=619&cHash=8f645b97885158d8d7746fc598533fc2

Piecemeal approach to unite all data

Table D 10: Combined data - Germany

Institution in charge	AMI
Source for data	Combination of all data sources listed under "Germany".
Data collected (indicator, product level)	Import data with breakdown by product in metric tonnes.
Method	Compilation and comparison of data in a database.
Tools (data collection, data processing/storage, classification used)	
Sample size/coverage	Not known, variation in the individual methods.
Voluntary/compulsory	Voluntary.
Legal base	
Availability	Depends on BLE and Ministry of Agriculture contracts with AMI.
Frequency of data collection	Annually
Advantages	
Disadvantages	Not complete, very time consuming process of data collection, many insecurities.
Reasons why method is chosen	
Lessons learnt	
Links	orgprints.org/19899; www.organic-world.net/news-organic-world.html?&tx_ttnews%5Btt_news%5D=619&cHash=8f645b97885158d8d7746fc598533fc2

Italy

Marta Romeo[55]

Import data based on information from the importers

Table D 11: Import data based on information from importers - Italy

Institution in charge	Ministry of Agriculture (MIPAAF - Ministero delle Politiche Agricole Alimentari e Forestali), in collaboration with the National Information System on Organic Agriculture (www.SINAB.it).
Source for data	Data from importers. (in the Italian case study, these data were cross checked with the import authorization dataset (only for non-equivalence third countries). Some information cannot be extrapolated from the self-declaration: in some cases the SINAB need to go back and check the import authorization. This is the Italian case study states that there are two sources of data: self-declaration and import authorization.
Data collected (indicator, product level)	All products (including processed), breakdown by production volume in metric tonnes; breakdown by country.
Method	The importers need to send the information on products they are planning to import to MIPAAF. Then MIPAAF, together with SINAB, collects the data among the importers, asking for the actual quantities (metric tonnes) imported and the countries of origin (by the end of the year). These data should usefully be compared against the organic data provided by customs. For this purpose, the Ministry is starting to work together with the National Customs Agency, which has developed specific codes for some organic products.
Tools (data collection, data processing/storage, classification used)	Currently SINAB is striving to improve its classification by using the TARIC Code for imported products, also thanks to the OrganicDataNetwork project. For the actual data collection, SINAB is using a simple form/data sheet. The information is stored in an excel file.
Sample size/coverage	100% of all importers (266 in total as at July 2014) that import products from third countries that are not in the equivalence regime, are covered. Starting with reference year 2012, data are available from the importers also for countries that are on the equivalence list. There is still no data on products coming from EU countries.
Voluntary/compulsory	Compulsory.
Legal base	DM n. 18354/2009, DM n. 8515/2010 (amending n. 18354), DM n. 700/2011 and DM n. 18378/2012 (all referred to the Reg. (EC) n. 1235/2008).
Availability	The data are made publically available on the SINAB website, together with the list of importers which is constantly updated. The statistics tables are collected in an annual paper publication.
Frequency of data collection	Annually, data per end of year.
Advantages	As the data collection is done by the MIPAAF itself, there are no problems with confidentiality of aggregate data; and there is a legal basis.
Disadvantages	The current data collection only covers a part of the imports to Italy, and there are no data on quantities coming from EU countries.

[55] SINAB, Italy

	Lack of verifiability of the existing data. However, with the computerised system, i.e. the direct survey among importers (who are all known to MIPAAF), and with the check with the Customs Agency, it will be possible to improve the quality of the data collection in the future.
Reasons why method is chosen	MIPAAF has access to the list of the operators and there is a legal base for the data collection.
Lessons learnt	As known, until 2011, imports of organic products coming from third Countries could be carried out through different ways: a) Imports from third Countries whose production standards and control system equivalence to the provisions of the European Union was established by the EU Commission; b) Imports from operators of a third Country whose method of production is rated equivalent by Inspection Bodies and authorized by the EU Commission to operate in certain Countries for certain product groups; c) For imports not covered by previous points and for a transitional period ending in 2014, Member States may still grant permissions for products obtained in accordance with EU regulations. For imports referred to in point (c), the MIPAAF, after specific verification activity, grants quantitative permissions to individual importing firms. The tables shared are the result of processing, created by SINAB, based on data relating to authorizations granted by the MIPAAF. The processed data represent the quantities actually imported from Italian companies that have obtained special authorization by the MIPAAF. It is therefore necessary to underline that such data, being related only to ministerial authorizations and not taking into account the other import modes (cases (a) and (b) above), are not exhaustive of all the quantities of organic products coming into Italy from third countries. Imports to Italy of organic products coming from third countries starting 2012 (reference year): for the first time the data presented include, in addition to the operations carried out in the transitional regime ((c) above), imports made under the equivalence ((a) and (b)). Although more comprehensive than in the past, it should be emphasized that the processing presented does not take into account the activities of intra-Community trade and therefore is not exhaustive of all the quantities of organic products that come to Italy from third countries through other EU countries.
Links	Data: www.sinab.it/content/bio-statistiche List of importers: www.sinab.it/bionovita/elenco-importatori-prodotti-biologici-da-paesi-terzi-9

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