The session ‘Enhancing integrity: Global overview and solutions’ at BIOFACH 2016, Germany, organised by Organic Services, and chaired by Gerald A. Herrmann, Director at Organic Services and a past president of IFOAM, focused heavily on the need for practical solutions to ensuring supply chain integrity in the organic market.

Organic Services decided to organise this session to examine how both public and private organisations are looking at this issue, but ultimately, to emphasise the need for a co-operative approach that addresses this issue from a wide variety of angles and a global perspective. These solutions are designed to reduce the administrative burden placed on the organic industry, and are evidence of the hard work and the value the industry has placed on ensuring that its consumers receive goods from supply chains with the highest levels of integrity.

These tools are designed to help authorities, such as the United States Department of Agriculture (USDA), ensure compliance with organic agriculture regulations. In its 2015 reporting period, the USDA received 549 complaints and levied civil penalties of US$ 1,872,815. This example is an indication of the effort that both regulators and the industry are exerting to achieve a high level of integrity within the organic supply chain.

With representatives from a variety of organisations, various approaches to tackling the issue of supply chain integrity were presented by a group of experts within this field, listed in the Table 1. All with the aim of bringing greater transparency to the organic market, each system provides clear advantages and disadvantages.

The USDA’s NOP Organic Integrity Database presented by Katherine DiMatteo (Wolf, DiMatteo + Associates) has been developed to provide the industry with up-to-date and accurate information in real time, replacing its annual approach to this service, in which its database was only updated once a year in January and did not reflect any updates made between these reporting periods. The USDA was determined to correct this and acted quickly once funds were made available for the development of a real time database, developing the system in about a year and a half, and ensuring that the public was involved in its development.

With support from Harmonia and Intact Consult (Intact), the USDA has made a public search functionality available and provided tools for certifiers to enter their data into the database. A major achievement of creating the database was the development of a harmonised product taxonomy.

### Table 1. Experts participating at the session

<table>
<thead>
<tr>
<th>Approach</th>
<th>Speaker</th>
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<tr>
<td>USDA NOP Organic Integrity Database, USA</td>
<td>Katherine DiMatteo, Wolf, DiMatteo + Associates</td>
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<tr>
<td>Electronic Document Exchange (e-TDE), USA</td>
<td>Monique Marez, Organic Trade Association (OTA)</td>
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<tr>
<td>Electronic Certificate of Inspection (e-COI), EU</td>
<td>Ivica Karas, EU Commission</td>
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<td>Bio Suisse, Switzerland</td>
<td>Hans Ramseier, Bio Suisse</td>
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<td>FEDERBIO, Italy</td>
<td>Roberto Pinton, FEDERBIO</td>
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<tr>
<td>Check Organic, Global</td>
<td>Frank Gerriets, Organic Services</td>
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A major achievement of creating the database was the development of a harmonised product taxonomy.
Green Week 2016, the forum for debating and discussing European environment policy, will take place from Monday 30 May to Friday 3 June. It will focus on the theme “Investing for a greener future”. “Investing is about more than money” is the idea - it is necessary to think about investing in sustainable development for future generations; through innovation for greener cities, sustainable use of terrestrial ecosystems and investing in the preservation of the oceans among other measures and initiatives.


The US’s Electronic Document Exchange (e-TDE) system presented by Monique Marez (Organic Trade Association - OTA) helps to streamline the document exchange process for imports into the US by sending multiple documents as one package, helping to reduce the chance for confusion by moving the system onto a single, paperless platform and answering the questions: who?, what?, when? and where?

There are three main steps in the system: 1) the exporter (document owner) uploads the information into the system; 2) the USDA’s authentication layer encrypts the information; and 3) document recipients (customs agents, importers, end buyers) can view the trade documents – the document owner can authorise who can view the documents.

The system developed from traders needing health inspection certificates for single commodities, such as eggs, milk or poultry. However, the applicability of this approach to the needs of the organic industry is an area that requires further investigation and discussion. Thus, the challenges this system faces are getting stakeholders involved and the effect that it will have on certifiers’ internal processes. Globally, the UN and Codex are looking at implementing a similar system, meaning that the industry needs to address the issues it has with such a system sooner rather than later because of the likelihood of a switch to such systems.

The EU’s Electronic Certificate of Inspection (e-COI) system presented by Ivica Karas (EU Commission) seeks to improve traceability, reduce fraudulent behaviours, lessen the administrative burden for operators and authorities and make statistical data on organic imports available.

However, this is a new system that is still under development, so the impacts of its use have yet to be seen.

Presentation by Ivica Karas from the EU Commission.

TRACES is a web-based system for the generation, issuance and endorsement of electronic certificates.
The system’s development stems from the Council’s recommendations (Ref. 2011/COU/0201) to assess the feasibility of such a system for organic imports, because of issues associated with the traceability of products within the EU and from third countries.

TRACES was identified as the most similar to what was needed for such a system, thus, the e-COI system has been built into TRACES. TRACES is a European-wide network that was established for the notification, certification and monitoring purposes of animals and animal products, and has since been extended to plants and plant products. TRACES is a web-based system that is available to all who partake in the generation, issuance and endorsement of the electronic certificates.

The system has been tested by certifiers, and workshops have already been held and are still to be held to train certifiers on the system. e-COI is currently in a crossroad phase, in which regulations are being amended and advanced-stage discussions are underway with Member States to make its use obligatory.

Technically, crush tests are ongoing with a training environment to be implemented by this month (March 2016) and an expectation to be in production by April 2016. A pilot phase is scheduled to be carried out until 2017. During this time, paper certificates will still be used until the transition to the new system is complete. Business analysis is a component expected to be developed in 2017.

Bio Suisse, presented by Hans Ramseier (Bio Suisse) an association of Swiss organic farmers, which ensures the integrity of the majority of organic products sold in Switzerland, is highly recognisable by Swiss consumers. With its more stringent standards on imports (no transport by air, no competition with Swiss organic farmers, no fresh produce from overseas except tropical fruits, no multi-ingredient products and full traceability), a new approach was needed to ensure that the approximately 2,000 farms, companies and small farmers’ cooperatives outside of Switzerland, that are certified to Bio Suisse standards, could be adequately tracked.

Therefore, a new import system, based on Intact’s Ecert software, was developed to register all imports into its database (by the exporter) so that risk-oriented quality measures could be applied and any identified risks could be quickly mitigated.

The system also maintains a list of all transactions by export and import companies and their status of approval, provides an overview of exporters’ certification status and eliminates the use of paper forms. However, this is only a qualitative approach, meaning that volumes are not known (as limited by the data provided by certifiers); it only uses a self-declaration with regard to certification status; its extension to all steps of the chain of custody is difficult; and interfacing it to TRACES is questionable. Compared to its previous approach of using Excel to register its transactions, however, this system is an important step forward in ensuring the integrity of the Bio Suisse supply chain.

FEDERBIO, presented by Roberto Pinton (FEDERBIO), an umbrella organisation encompassing a wide spectrum of the Italian organic market, has also worked with Intact and Organic Services to develop tools to prevent fraud in its industry. This industry has faced several scandals following large investigations by the authorities in Italy, based on information provided

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**COMBINED: FEDERBIO, BIONEXT & CHECK ORGANIC**

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<tr>
<th>Transaction certificate</th>
<th>Risk assessment</th>
<th>Industry built supply chains</th>
<th>Financial</th>
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<td>products</td>
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<td>Certificate data</td>
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<td>Supply chain actors cross prgms</td>
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</tbody>
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**Level of services**

- FederBi
- Bionext
- Check Organic

**Blank areas:** Check Organic is a paid service and data mining is restricted to protect confidential business information.
by FEDERBIO, to tackle fraud in the organic food sector. In response, a real-time approach to volume monitoring, based on Intact software, is being implemented because the largest Italian supermarket chains, as well as the organic wholesale business and leading grocer, demanded participation in this system, moving the Italian accreditation agency to require participation and making available a database of all Italian organic certification data.

Delivery of the data to the system in real time comes directly from certifiers active in Italy because the Ministry of Agriculture was not ready to undertake such a project. This demonstrates that this undertaking was and still is no simple feat, considering the variety of factors involved and the lack of any examples both in the conventional and organic markets on which to base such a system.

The system, however, does not map out supply chains and is currently only applied to grain production, but efforts to include other critical supply chains are underway. Future plans are to expand its application to rice, olive oil and tomato supply chains, as well as geographically to imports from Eastern Europe and other regions to close all possible loopholes in the system.

Check Organic presented by Frank Gerriets (Organic Services), also based on Intact software, goes beyond these approaches – the industry needs tools that take certification to a whole new level to ensure that the organic supply chain has a high level of integrity. With the market’s rapid expansion and the growing complexity of organic supply chains, tools to help mitigate the risk of fraud are needed.

Fraud presents itself in two ways: 1) as certificate fraud and 2) as quantity fraud.

Check Organic addresses the risk of fraud by bringing together data from multiple sources, by not publishing certificates but only certification data (certificates can be forged if they are published), by including public and private databases in a real-time system, by linking certifier data to supplier data so that supply chains can be mapped out and volumes monitored through a mass-balance approach, by having a harmonised product taxonomy, by accommodating multi-lingual users, and by making participation by certifiers attractive. However, participation is not mandatory, nor does it specifically address issues related to risk management, as this has to be tackled either within the third-party certification system or by specific industry solutions.

Finally, Gerald A. Herrmann (Organic Services) presented an overview of selected public (based on organic regulations) and private integrity approaches (based on risk and residue assessment, mass balance (FEDERBIO system) and Check Organic) based on parameters important for achieving integrity.

Radar charts were chosen to visualise and benchmark the various approaches. The USDA’s Organic Integrity Database receives high marks for its right to require participation, openness (no fees for use), technological sophistication, and harmonised product taxonomy. The EU’s approach has failed to create an EU-level database, but with the development of e-COI, is improving.

A look at exporting countries shows that in the cases of Tunisia and Turkey, more comprehensive systems have also been developed to

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**Radar charts were chosen to visualise and benchmark the various approaches.**
standards & regulations

protect their export markets, receiving high marks for their recording of acreage and product data as well as for certifiers having to clear exported quantities.

Within the private approaches, FEDERBIO receives high marks for its right to require participation (an exception for a private approach), its ability to build volume-based supply chains (which need the integration of the ERP systems of involved companies) and its strong coverage of the organic grain supply chain in Italy. It, however, does not take into account risk assessment or residue testing and is not able to map supply chains.

The approach developed by Bionext, the Dutch organic umbrella organisation, focuses heavily on risk assessment and residue analysis, but does not look much at other parameters selected for this comparison. The certifiers themselves receive high marks for their compliance with organic regulations, providing the basis for the system (certification data), but have not branched out to offer additional tools to help ensure supply chain integrity outside of authorisation/accreditation.

Check Organic in general receives high marks for having the broadest coverage of integrity parameters, but participation is not mandatory nor does it integrate issues related to risk assessment or residue analysis. No single approach or system can address all the issues the industry is facing, but by co-operating with FEDERBIO and Bionext, Check Organic has found a way to close the gaps.

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The most important fair of organic products and responsible consumption in Spain is BioCultura. The next edition takes place from 5 to 8 of May 2016 at the Palau Sant Jordi, Barcelona.
More information at: www.vidasana.org

Presentation by Katherine DiMatteo from Wolf, DiMatteo + Associates and Gerald A. Herrmann, Director at Organic Services.