Olive Oil Case Study

As a part of the large European FoodIntegrity project, Organic Services (as Work Package 16) conducts a feasibility study about the potential of 'Check X' ('Check Organic') to better share information along the supply chain to prevent and detect food fraud.

As a first part of the two-year research, Organic Services has focused in on the olive oil industry, in the framework of an Olive Oil Case Study. Thanks to the participation of two Universities, one government institution and three olive oil companies in Spain, Italy, and Greece, who agreed to in-depth interviews, Organic Services has mapped the olive oil supply chain and identified the parts of the supply chain that are most vulnerable to fraud as well as the types of fraud that are most likely to occur. Finally, the olive oil case study concludes (following the Routine Activity theory), how 'Check X' can best function as an additional control measure to mitigate the fraud risks that exist wherever there are motivations and opportunities for fraudulent practices:

At the level of single supply chain actors, 'Check X' Internal Compliance module and Supply Chain Mapping module can serve as a risk mitigation measure to reduce food fraud vulnerabilities in the own company supply chain. These 'Check X' modules allow companies to more effectively employ risk mitigation measures such as internal audits and laboratory tests, allowing to prevent and detect potential fraudulent practices of suppliers.

At the level of the Spanish, Italian or Greek olive oil sector, 'Check X' Volume Monitor module can be an effective fraud risk mitigation measure if all supply chain actors participate in the system, and detailed data on olive oil purchases and sales is entered. The Volume Monitor module would be used to make mass balance calculations not only of olive oil, but also the volumes of extra virgin olive oil, virgin olive oil, and refined olive oil produced, traded, blended and bottled, as well as for olive oil from the different origins. This would allow the system to catch fraudulent practices such as adulteration (the mixing of olive oil with other types of oil), intentional mislabeling (labeling olive oil as extra virgin olive oil, or olive oil from different origins as Italian olive oil), or deception based on technological alteration (virgin olive oil partially refined and sold as extra virgin olive oil).

While 'Check X' would need to be combined with fraud mitigation measures focused on the physical product, such as laboratory tests, the cloud-based system has the potential to detect and prevent the various fraudulent practices present in the olive oil industry.

The Italian Organic Integrity Platform (OIP) operated on 'Check X'/ 'Check Organic' technology will start in October 2017 with mass balancing the organic olive oil sector in Italy, an application which will help us to even better understand the fraud prevention potential of 'Check X'. See Organic Services' news update here.