



# Practical real-world food fraud control measures

Words by Clare Winkel

All Global Food Safety Initiative (GFSI) food safety standards now require a food fraud vulnerability assessment across a food manufacturer's entire supply chain, with a major emphasis on ranking raw materials for potential vulnerability.

If any potential fraud is identified by the investigation, it is expected that appropriate mitigation strategies and control measures will be implemented.

Using a risk assessment and ranking method I developed in 2016, I recently re-assessed the raw materials for a company that had originally been assessed in 2018.<sup>1</sup> The original 34 raw material rankings ranged from the highest score of 60 to the lowest score of 3, out of a possible highest score of 125.

The next lowest score was 32, and the next was 24. In 2020 the 23 raw material rankings ranged from a high score of 18 to the lowest score of 3, yet many of the ingredients were the same. What else had changed?

The reason the score improved so much was that the company had spent time examining its suppliers and assessing what they really knew (or did not know) about their ingredient supply chain. As a result,

they changed not just their suppliers, but also their supply chains, so they knew the country of origin and could identify each major step in the supply chain, combined with the controls already in place.

## Changing suppliers can decrease uncertainty

For example, the ingredient that scored 60 in 2018, was supplied by a broker who gave two different countries of origin, no source manufacturer, no certifications and no certificate of assurance or batch specific lab results. Not only did the supplier fail to undertake any control measures, the company purchasing the product took no samples and didn't carry out any testing or conduct even basic sensory assessment.

In 2020, that same ingredient is now supplied by a wholesaler who supplied the following information and documentation:

- Country of origin
- Name of the source manufacturer
- Current GFSI certificate of the source manufacturer
- Current GFSI certificate of the wholesaler

- Certificate of assurance from the source manufacturer.

The company then undertook sensory evaluation (appearance, aroma and taste) of received products and also conducted a detailed review of the product information form (PIF).<sup>2</sup>

This closer analysis found that the raw material was not sourced from a species at high risk from fraud (as had been assumed), but was instead sourced from a different species which had a much lower risk of fraud.

The PIF contains useful information when you are starting your food fraud assessments - if it is completed correctly and completely - including information on product description (often listing species Latin name), country of origin, source manufacturer, ingredient declarations, allergens, product description, legal description, allergen management and controls in place, suitability for claims, physical, organoleptic, chemical and micro specifications, that can all be matched to information from your supplier.

The general history of fraud for each ingredient was identified using the Horizon Scan database. This database lists all daily recalls from almost every

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country in the world, along with many national border rejections, covering food safety and food fraud issues for thousands of raw materials and packaging.

This analysis enables you to easily and correctly quantify the risk for that raw material, and the risk for the specific country of origin, and search for specific suppliers. Horizon Scan can also identify what type of adulterants you should be looking to test for.<sup>3</sup>

### **Public databases can help detect inconsistencies**

Many supplied audit certificates can be matched to the standards public access database to confirm that it is indeed legitimate. Any discrepancy between stated information in the PIF, audit certificates and certificate of assurance needs to be investigated. If you suspect the certificate of assurance you are receiving may be fraudulent, line up 12 months of records to see if the results are identical, as

almost no product sourced from plants or animals will be identical all year round. The next step is to take a product sample and get it tested independently.

Even taking a sample of the product at each delivery and smelling it, feeling it, and assessing the colour against a known master sample, can help identify batch to batch discrepancies. If a sample is identified as 'different' to a known sample, then a 'presence/absence' test for starch or gluten can often identify additional components that may indicate fraud.

There are also a wide range of sophisticated lab tests that can be undertaken to identify food fraud, but start with some consistent and complete supply chain information, and product sampling, to minimise your risk to food fraud in your raw materials.

Know and understand your supply chains, use sensory evaluation, review the detail on the PIF, read the

information printed on the actual ingredient cartons, research the history of fraud for each ingredient, identify what type of adulterants you should be looking for, obtain valid certificate of assurances, and then get it tested independently.

### **References**

1. <https://www.integritycompliance.com.au/course?courseid=20-raw-materials-assessment>
2. <https://www.afgc.org.au/industry-resources/product-information-form-version-6>
3. <https://www.integritycompliance.com.au/pages/global-food-integrity-and-risk-system>
4. "What does a Food Fraud Vulnerability Assessment Look Like?" at the *BRC Global Standards, Food Safety Americas*. 2019, San Diego USA. <https://vimeo.com/351518036>
5. "When it doesn't smell, look or feel right: Food Fraud Detection & Mitigation in the raw material supply chain. A case study of food fraud." *SQF International Conference*, Atlanta Georgia USA. <https://vimeo.com/301102480>

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