

Introduction

NSF and The Food Standards Agency are working together to help the industry and regulators identify the potential drivers for food fraud. Please help us with 15 minutes of your time by completing this short questionnaire.

The questionnaire consists of 22 questions and an open comment box.

We would be very grateful if you would answer all questions. Your contribution is very valuable to us. This can be completed as a team or by an individual.

Your best guess or your perceptions are what we are after. Your responses will be kept anonymous and your company will not be identified in the data collected.

Economically Motivated Adulteration (EMA) is the intentional fraudulent modification of a finished product or ingredient for economic gain through the following methods: unapproved enhancements, dilution or substitution with a lesser- value ingredient, concealment of damage or contamination, mislabelling or failing to disclose required product information.(GMA 2010).

Antecedents of food fraud

For the purpose of this survey, 'food fraud' is defined as the addition of nonauthentic substances or removal or replacement of authentic substances without the purchaser's knowledge (adulteration and dilution) or mislabeling of goods that are deliberately placed on the market with the intention of deceiving the consumer for economic gain to the seller.

Please take into consideration the potential profit which is a combination of the value of the commodity and the demand. For example caviar is high value low demand and milk low value and high demand. Each of these items would provide a high profit rating.

1. Below are physical states of food items. The physical state of food can impact the ease or not with which food fraud can be perpetrated. Please rate each in your opinion how difficult or easy each one makes in terms of committing food fraud.

	1 Makes food fraud very difficult	2 Makes food fraud difficult	3 Makes food fraud somewhat difficult	4 Makes food fraud somewhat easy	5 Makes food fraud easy	6 Makes food fraud very easy	I don't know
Liquid	☐	☐	☐	☐	☐	☐	☐
Solid	☐	☐	☐	☐	☐	☐	☐
Powder	☐	☐	☐	☐	☐	☐	☐
Fresh	☐	☐	☐	☐	☐	☐	☐
Frozen	☐	☐	☐	☐	☐	☐	☐
Whole food item - e.g. whole fish, apple, carcass	☐	☐	☐	☐	☐	☐	☐
Prepared e.g. filleted, pureed, minced	☐	☐	☐	☐	☐	☐	☐
Ground	☐	☐	☐	☐	☐	☐	☐
Dried	☐	☐	☐	☐	☐	☐	☐
Homogeneous consistency	☐	☐	☐	☐	☐	☐	☐
Mixed consistency	☐	☐	☐	☐	☐	☐	☐
Colourless	☐	☐	☐	☐	☐	☐	☐
Non-characteristic colour	☐	☐	☐	☐	☐	☐	☐
Characteristic colour	☐	☐	☐	☐	☐	☐	☐
Characteristic flavour	☐	☐	☐	☐	☐	☐	☐
Characteristic texture	☐	☐	☐	☐	☐	☐	☐

Other (please specify)

From a fraudsters perspective

Food fraud is a business like any other. A matrix approach has been developed to identify business risk-benefit from the standpoint of the Fraudster.

In this exercise, we are looking for your perceptions on how worthwhile a food fraud is to the fraudsters for typical adulterations that we know have occurred.

***2. Please select a profit classification for each of the materials listed below, with the proviso that full or partial adulteration of the goods is undertaken.**

	6 Very High	5 High	4 Medium	3 Low	2 Very Low	1 No Profit	I Don't Know
Alcohol spirits	☐	☐	☐	☐	☐	☐	☐
Alcohol wines	☐	☐	☐	☐	☐	☐	☐
Beverages Non Alcoholic (exc Fruit Juice)	☐	☐	☐	☐	☐	☐	☐
Bread	☐	☐	☐	☐	☐	☐	☐
Cereals including Grains and Flours	☐	☐	☐	☐	☐	☐	☐
Cocoa products - chocolate	☐	☐	☐	☐	☐	☐	☐
Coffee	☐	☐	☐	☐	☐	☐	☐
Cheese	☐	☐	☐	☐	☐	☐	☐
Dairy product liquid dairy	☐	☐	☐	☐	☐	☐	☐
Dairy product milk powder	☐	☐	☐	☐	☐	☐	☐
Egg	☐	☐	☐	☐	☐	☐	☐
Fats and oils	☐	☐	☐	☐	☐	☐	☐
Fish	☐	☐	☐	☐	☐	☐	☐
Flavours	☐	☐	☐	☐	☐	☐	☐
Fruit (including prepared)	☐	☐	☐	☐	☐	☐	☐
Fruit juice	☐	☐	☐	☐	☐	☐	☐
Herbs	☐	☐	☐	☐	☐	☐	☐
Spices	☐	☐	☐	☐	☐	☐	☐
Honey	☐	☐	☐	☐	☐	☐	☐
Red Meat	☐	☐	☐	☐	☐	☐	☐
Poultry	☐	☐	☐	☐	☐	☐	☐
Nuts	☐	☐	☐	☐	☐	☐	☐
Rice	☐	☐	☐	☐	☐	☐	☐
Sauces (inc Condiments and Dressings)	☐	☐	☐	☐	☐	☐	☐
Tea	☐	☐	☐	☐	☐	☐	☐
Vegetables (including prepared)	☐	☐	☐	☐	☐	☐	☐

***3. From the list of items below and your knowledge of current test methods available to detect adulteration please assign a score for the likelihood of authorities or purchaser detecting the adulteration. We are looking to identify the products most at risk.**

	1 Highly Likely to be detected	2 Likely to be detected	3 Quite likely to be detected	4 Quite unlikely to be detected	5 Unlikely to be detected	6 Very unlikely to be detected	I Don't Know
Alcohol spirits	☐	☐	☐	☐	☐	☐	☐
Alcohol wines	☐	☐	☐	☐	☐	☐	☐
Beverages Non Alcoholic (exc Fruit Juice)	☐	☐	☐	☐	☐	☐	☐
Bread	☐	☐	☐	☐	☐	☐	☐
Cereals including Grains and Flours	☐	☐	☐	☐	☐	☐	☐
Cocoa products - chocolate	☐	☐	☐	☐	☐	☐	☐
Coffee	☐	☐	☐	☐	☐	☐	☐
Cheese	☐	☐	☐	☐	☐	☐	☐
Dairy product liquid dairy	☐	☐	☐	☐	☐	☐	☐
Dairy product milk powder	☐	☐	☐	☐	☐	☐	☐
Egg	☐	☐	☐	☐	☐	☐	☐
Fats and oils	☐	☐	☐	☐	☐	☐	☐
Fish	☐	☐	☐	☐	☐	☐	☐
Flavours	☐	☐	☐	☐	☐	☐	☐
Fruit (including prepared)	☐	☐	☐	☐	☐	☐	☐
Fruit juice	☐	☐	☐	☐	☐	☐	☐
Herbs	☐	☐	☐	☐	☐	☐	☐
Spices	☐	☐	☐	☐	☐	☐	☐
Honey	☐	☐	☐	☐	☐	☐	☐
Red Meat	☐	☐	☐	☐	☐	☐	☐
Poultry	☐	☐	☐	☐	☐	☐	☐
Nuts	☐	☐	☐	☐	☐	☐	☐
Rice	☐	☐	☐	☐	☐	☐	☐
Sauces (inc Condiments and Dressings)	☐	☐	☐	☐	☐	☐	☐
Tea	☐	☐	☐	☐	☐	☐	☐
Vegetables (including prepared)	☐	☐	☐	☐	☐	☐	☐

4. Please detail methodology you currently undertake (analytical/visual etc) to specifically assist with detection of adulteration in your current process. Please include details of limit of detection if any and frequency. If easier this information could be provided as a separate document to foodfraud@nsf.org

***5. For the following well known cases of deliberate adulteration please assign a score for likelihood of detection and profit associated with the fraud BEFORE the authorities became aware.**

	Profit	Risk of Detection
Horsemeat sold as beef		
Sudan 1 in Chilli		
Melamine in Milk		
Methanol in Alcohol		
Adulteration of Honey		
Pomegranate Juice adulterated with Apple Juice		

Comments

6. On a scale of 1-4, where 1 is 'not important at all' and 4 is 'very important', rate the following factors in terms of how important you think each factor is in the fraudster's decision to commit the fraud.

	1 Not important at all	2 Quite Important	3 Important	4 Very important	I don't know
The physical state of the item	☐	☐	☐	☐	☐
High level of supply chain assurance	☐	☐	☐	☐	☐
Availability of adulterant	☐	☐	☐	☐	☐
Process of adulteration/substitution	☐	☐	☐	☐	☐
Labelling	☐	☐	☐	☐	☐

Other relevant factors(please specify)

***7. On a scale of 1-4, where 1 is 'not important at all' and 4 is 'very important', rate the following factors in terms of how important you think each factor is in the fraudster's decision to commit the fraud.**

	1 Not important at all	2 Quite Important	3 Important	4 Very important	I don't know
The cost of the adulterant/substitute	☐	☐	☐	☐	☐
The cost of processing in the adulteration/substitution	☐	☐	☐	☐	☐
The product commands a premium price	☐	☐	☐	☐	☐
The strength of supply chain accounting	☐	☐	☐	☐	☐
Buyers' use of benchmarks in supply chain	☐	☐	☐	☐	☐
Buyers' knowledge of costs in the supply chain	☐	☐	☐	☐	☐
Buyers' knowledge of the lowest prices available	☐	☐	☐	☐	☐
History of the adulteration being conducted previously	☐	☐	☐	☐	☐
Complexity of the supply chain	☐	☐	☐	☐	☐
Availability of test methods to detect	☐	☐	☐	☐	☐
Cost of test methodology	☐	☐	☐	☐	☐
Hazard to Health of consumer	☐	☐	☐	☐	☐
Type of raw material category	☐	☐	☐	☐	☐
Type of product category	☐	☐	☐	☐	☐
Demand for product	☐	☐	☐	☐	☐
Number of interested buyers	☐	☐	☐	☐	☐
The source of the product	☐	☐	☐	☐	☐
The strength of supply chain relationships	☐	☐	☐	☐	☐
Brand ownership	☐	☐	☐	☐	☐
Strength of the Specification of the item to be purchased	☐	☐	☐	☐	☐

Tools for the industry and the fraudster.

8. The following sources of information have been identified as useful tools to assist in the prevention and detection of food fraud :

Price Index Indicators

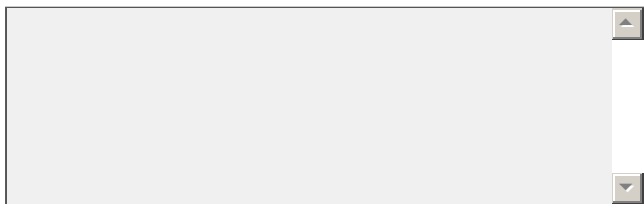
RASSF

USP Fraud Database (US)

The National Centre for Food Protection and Defence (US)

Food Standards Agency Fraud Database.

Please advise if you are aware of further tools or sources of information available and provide URL if possible.

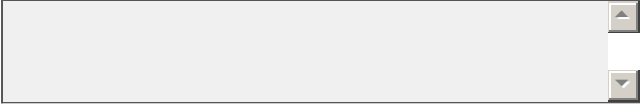


9. Is there a mechanism in place within your organisation to alert you if a product price is too good to be true?

☐ Yes

☐ No

10. Please provide details of this mechanism, including any external sources of information.



11. What is the organisational type you currently work for?

Other (please specify)

12. What is your current industry sector? Please select all that apply.

- | | |
|---|---|
| ☐ Confectionery | ☐ Alcoholic drinks & Fermented/brewed products |
| ☐ Fruit, Vegetables & Nuts | ☐ Dried Foods & Ingredients |
| ☐ Cooked Meat & Fish Products | ☐ Cereals & Snacks |
| ☐ Beverages | ☐ Low/High acid foods in cans/glass |
| ☐ Oils & Fats | ☐ Ready Meals & Sandwiches; RTE Desserts |
| ☐ Ambient Foods | ☐ Raw cured &/or Fermented Meat & Fish |
| ☐ Raw Prepared Products (Meat & Vegetarian) | ☐ Raw Poultry |
| ☐ Raw Red Meat | ☐ Dairy, Liquid Egg |
| ☐ Raw Fish Products & preparations | ☐ Bakery |

13. Do you supply retailer own brand products?

- ☐ Yes
- ☐ No

14. Please select the ingredient types you handle

- ☐ Alcohol spirits
- ☐ Alcohol wines
- ☐ Beverages Non Alcoholic (exc Fruit Juice)
- ☐ Bread
- ☐ Cereals including Grains and Flours
- ☐ Cocoa products - chocolate
- ☐ Coffee
- ☐ Cheese
- ☐ Dairy product liquid dairy
- ☐ Dairy product milk powder
- ☐ Egg
- ☐ Fats and oils
- ☐ Fish
- ☐ Flavours
- ☐ Fruit (including prepared)
- ☐ Fruit juice
- ☐ Herbs
- ☐ Spices
- ☐ Honey
- ☐ Red Meat
- ☐ Poultry
- ☐ Nuts
- ☐ Rice
- ☐ Sauces (inc Condiments and Dressings)
- ☐ Tea
- ☐ Vegetables (including prepared)

15. Which if any of the following means of protecting against food fraud do you use?

- ☐ Purchasing Policy e.g. direct supply
- ☐ Supplier Approval
- ☐ Risk Assessment
- ☐ Audit of behalf of your organisation
- ☐ Fraud specific audit
- ☐ Testing
- ☐ Intelligence gathering to inform policy

Other (please specify)

16. Your Details

	Role Type	Number of years in Industry
Your role and experience		
Other (please specify)		

17. Country of Head Office:

18. If you completed this as a group, please provide the following details.

	Job title	Time in food industry
Person 1		
Person 2		
Person 3		
Person 4		
Person 5		
Person 6		

Further Participation

Following this survey we plan to form an expert working group to further discuss the issue of food fraud. If you are available to provide further support to this project please provide your details and area of expertise below.

19. Your Details

Name:	
Company:	
Country:	
Email Address:	
Phone Number:	

20. Area of expertise

21. Do you have any further comments to raise relating to economically motivated adulteration that you wish to share?

22. Would you be willing to take part in a further interview to elaborate further?

- ☐ Yes
- ☐ No