



Food crimes, food harms and the food system – SI introduction

Nicholas Lord¹ · Wim Huisman² · Letizia Paoli³

Published online: 5 November 2022

© The Author(s), under exclusive licence to Springer Nature B.V. 2022

“And when one reflects upon the many cases which must escape detection..., under the slender supervision of the market inspectors - and how else can one explain the boldness with which [tainted] whole animals are exposed for sale? - when one considers how great the temptation must be, in view of the incomprehensibly small fines...; when one reflects what condition a piece of meat must have reached to be seized by the inspectors, it is impossible to believe that the workers obtain good and nourishing meat as a usual thing. But they are victimized in yet another way by the money-greed of the middle classes. Dealers and manufacturers adulterate all kinds of provisions in an atrocious manner, and without the slightest regard to the health of the consumers.” (Friedrich Engels, *The Condition of the Working Class in England*, 1892 p. 81)

Behaviours, activities and conditions constituting what are now referred to as ‘food crimes’ are not new phenomena. When Friedrich Engels visited Manchester, UK, in the 1840s, his analysis of the conditions within which ‘working class’ people were living illuminated varying cases of unlawful and/or harmful food practices that routinely formed part of food production and trade. Engels also examined the situational and structural conditions that generated or facilitated such practices, mentioning regulatory indifference, inadequate laws and the entrepreneurs’ willingness to make money with all means, as the quote above indicates. He also noted that the sale of unfit meat and, more generally, the adulteration of foodstuffs harmed varied individuals, but disproportionately affected people from lower social-economic backgrounds.

Edwin Sutherland ([1949] 1983), too, was well aware of the many and serious harms generated by the food industry and, in his seminal book on white-collar crime, traced back the largest number of adverse decisions to two meat-packing

✉ Wim Huisman
w.huisman@vu.nl

¹ University of Manchester, Manchester, UK

² VU Amsterdam, Amsterdam, the Netherlands

³ KU Leuven, Leuven, Belgium

businesses, Armour & Company and Swift & Company. In the 44 years Sutherland considered, each company had totalled 50 adverse decisions and engaged in various illegal activities, including antitrust practices, copyrights infringement, unfair labour practices, espionage, and profiteering. Following Sutherland, Hartung (1950) zoomed in on several forms of profiteering committed by the wholesale meat industry in Detroit in an article published in 1950.

As these early studies suggest, ‘food crime’ is a broad construct that incorporates an array of criminal or otherwise illegal activities. The expression itself was first introduced in the academic debate by Croall (2007), who since 2007 published several articles and book chapters on the topic. Though initially her and other scholars’ attention was focused on food fraud, in a review article published in 2013, Croall (2013) listed the following types of food crime:

- food fraud;
- food poisoning involving rule violations about the handling of food;
- labelling offences;
- anti-competitive trade practices;
- pricing crimes;
- human trafficking and labour exploitation in food production (referring to the high number of occupational deaths in agriculture, and the global exploitation of migrant workers in agriculture, commercial fishing, and food processing); and.
- food-related financial crime.

Croall’s work and later studies reveal that food crimes often intersect with other crime phenomena and concepts. These include white-collar and corporate crime (e.g., when business actors adulterate or mislabel the products they sell), organized crime (e.g., when criminal gangs produce or distribute counterfeit alcohols or nutritional supplements), state-corporate crime (occurring when, for example, large commercial organisations unduly control, with state authorities’ tolerance or active support, entire industries or supply chains) and green crime (due to the impact of food production on environmental sustainability), amongst others.

It has also become apparent that food crimes can engender serious harm for many bearers, ranging from individuals to businesses, from the public sector to the physical environment and animals. Food crimes also affect many interest dimensions, especially in the case of individuals. In fact, with reference to the categories of Greenfield and Paoli’s (2013, 2022) harm assessment framework, such crimes can generate harms to individuals’ physical integrity (for example, when adulterated food is being sold), to their material support (e.g., when customers are defrauded) or to multiple interest dimensions, including, in addition to those already mentioned, reputation as well as privacy and autonomy (for example, when vulnerable labourers are exploited in slaughterhouses or in other phases of the food production process). In the case of the private sector, too, multiple interests are often at stake. Food crimes harm the financial interests of law-abiding businesses, which find themselves at a disadvantage vis-à-vis those using fraudulent methods, they can corrupt the functional integrity and reputation of the latter and, once a big scandal occurs, they also undermine consumer confidence in the whole food

industry. Likewise, whenever public corruption is involved, the functional integrity and the reputation of competent regulatory authorities are affected and public trust in the latter might be endangered, even in the absence of corruption, when a scandal reveals the inadequacy of the regulatory system.

These various, serious harms have become manifest in multiple scandals that have shuttered the food industry since the 1990s even in western European countries. The most dramatic one was the crisis provoked by the bovine spongiform encephalopathy (BSE or mad-cow disease) in the UK—and then the rest of Europe—in the early 1990s. After contracting the human variant of BSE from beef, more than 180 people died, over four million head of cattle were slaughtered in an effort to contain the outbreak, and British beef was banned from export to numerous countries around the world (Collee et al., 2006; see also Philips et al., 2000). In the same period, Belgium was hit by both the dioxin and the hormone mafia scandals. The former involved the contamination of animal feed with dioxine, which then entered meat, dairy and egg production chains. The most serious consequences were felt by the pig sector, in which 60,000 pigs had to be killed and 2000 farms were blocked for several months (Cazaux, 2003: 157; Hoffmann & Harder, 2010: 15; Lierman, 2009). In those years, growth hormones were also recklessly added to animal feed to accelerate animal growth. Suggesting the involvement of organized crime figures and methods in the industry: in 1995 a Belgian veterinarian and inspector, Karel van Noppen, was shot after exposing breeders who had illegally used growth hormones, their suppliers and corrupt civil servants (van der Meulen & Freriks, 2006). It is not only the meat sector, in which widespread lawbreaking and illicit criminal entrepreneurship have become manifest. The “Black Fish Scandal” in the UK saw the flouting of regulations and quotas on a commercial scale netting the protagonists £63 million through the illegal landing of undeclared fish (Smith, 2015). More recently, scandals have included the adulteration of milk and infant formula in China, which was discovered in 2008, the adulteration of beef products with horsemeat that came to light in 2013, the insecticide fipronil in eggs scandal that emerged in 2017, and the slaughter of sick cows for human consumption in 2019 (Kersten, 2022). Serious harms arise also from ongoing food production activities, even if they do not become the focus of a scandal. In Southern Italy for example, thousands of itinerants, mostly from Africa, some from Eastern Europe, are repeatedly exploited and abused, while picking tomatoes and other products that are then exported to the rest of Europe. So bad are the living and working conditions endured by the migrants that campaigners have dubbed them ‘Europe’s tomato slaves’. Despite repeated protests, their condition has yet to significantly improve (e.g., Dines & Rigo, 2015). Finally, food marketing practices of ‘Big Food’ corporations have also come under scrutiny. Their business model of securing the continuous and ever-growing consumption of food products is increasingly associated with negative health outcomes, such as diabetes and obesity (Leon & Ken, 2019). From the lens of critical criminology, the production of these harms has been labelled as ‘legal corporate crimes’ or ‘crimes without law breaking’ (Ritchie, 2004).

The EU reacted to the multiple, serious scandals of the 1990s through a series of policy initiatives, culminating in the enactment of Regulation EC 178/2002, which is a sort of constitution of EU food law and is known as General Food Law (GFL;

van der Meulen, 2010). Under the pressures of the crises, GFL abandoned the earlier almost exclusive focus on trade facilitation and prioritized the protection of food safety and human health (Ansell & Vogel, 2006; Lawless & Wiedemann, 2011; Vos, 2000), which is seen both as a goal in itself and as a means to protect the food businesses' reputation and hence material interests (Kersten, 2022). The protection of live animals was also increasingly emphasized, even if serious harms to the latter remain legal and, to a large extent, normalised (see, e.g., Ritchie, 2004; Rossi & Garner, 2014).

The GFL and the related national laws also contributed to a risk-based approach in food regulation, emphasizing the responsibility of the sector (Ansell & Vogel, 2006; Lawless & Wiedemann, 2011; Vos, 2000) and encouraging the businesses' reliance on private certification process and supplementary standards (Havinga, 2006). Some standards are implemented by operators on a voluntary basis, in other cases regulation obliges food businesses to adopt specific standards as in the case of the Hazard Analyses Critical Control Points-system (HACCP) (Wengle, 2016). In the aftermath of the horsemeat the Global Food Safety Initiative (GFSI) added new requirements in its benchmarking requirements requiring certification schemes to consider food fraud in addition to food safety and food defence. Food companies were expected to undertake food fraud vulnerability assessments and prepare control plans to mitigate fraud risks (GFSI, 2018). As a result of these inputs, an innovative public-private system of regulation has emerged, in which even criminal activities are prevented and controlled with a mix of regulatory tools and procedures (e.g., Kersten, 2022).

Despite Engels, Sutherland and Hartung's early insights, the multiple, heterogeneous types of food crimes and the serious harms to different bearers they provoke, criminologists have long given very little attention to malpractices in the food industry. Even the serious scandals that occurred during the 1990s did not raise their interest, perhaps because some of the underlying harmful practices were not perceived to be motivated by criminal intent or because the regulatory system that emerged to deal with food crimes went beyond the expertise of most mainstream criminologists. Croall's (2007) first review of the literature found only a few relevant publications. Although some articles on the topic were published in the subsequent years (e.g., Walters, 2007, 2010; Lierman, 2009; Spink & Moyer, 2011, 2013; Cheng, 2012), in 2013 she concluded that 'food crime, has, to date, not been subject to detailed criminological analysis' (Croall, 2013: 173).

Since then, though, food crimes have finally started to receive substantive attention from the criminological community, including in the journal *Crime, Law and Social Change* (see Spencer et al., 2018; Leon & Ken, 2019). A few PhD theses have been dedicated to specific manifestations of food crime or their prevention and control (e.g., Gussow, 2020; Kersten, 2022). Scholars from the field of food science have also moved into studying food crimes and have sought collaboration with criminologists (van Ruth, Huisman, et al., 2017; van Ruth, Luning, et al. 2017; Yang et al., 2019); Lawrence et al., 2022). Besides answering criminological research questions on prevalence, organization and motivations, such studies include food product composition and authenticity testing. Methods such as DNA fingerprinting

techniques and mass spectrometry are used to detect whether different foodstuffs have been illegitimately adulterated. The very nature of food crimes, in fact, implies a need to bring together a diverse range of disciplinary areas beyond criminology (e.g., sociology, food science, business, etc.) and interdisciplinary theoretical and conceptual frameworks to understand them and develop appropriate explanatory accounts. Academic and specifically criminological research is also increasingly promoted by the national and international policy community, which seems to be increasingly concerned about the undermining of the food systems and associated harms (Lord et al., 2017) and feel the need to ‘do something about it’ (Lord, 2017). For instance, supranational organisations, such as the EU, are becoming progressively concerned that recent scandals signal an increase in the number of food crime incidents and that this trend reflects a structural weakness within the food chain and so have developed strategies and priorities for responding (European Parliament, 2013): 7).

With this context in mind, this special issue on *Food Crimes, Food Harms and the Food System* is intended to take stock of the recent criminological literature on food crime and to bring together high quality, empirically informed articles on this under-researched and under-theorised area of criminology of global relevance. The call sought papers that explicitly make connections between food crimes and food harms, and the food system itself, including the extent to which the food industry, food businesses and food markets provide opportunities for food-related criminal behaviours and for responding to these harmful activities. More specifically, submitted manuscripts were concerned with: the causes, nature and organisation of food crimes and their harms; the extent and scope of food crimes and their harms; common trends, patterns and features of food crimes and their harms; and the societal responses, both state and non-state, to food crimes and their harms. The intention of the special issues is to bring together the state-of-the-art knowledge on food crimes that is of relevance for both the development of social scientific knowledge on these themes but also the informing of policy and practice.

This special issue contains 8 articles that offer an excellent overview of the state-of-the-art in food fraud research. Responding to the increasing interest in food fraud from both the natural and social sciences Lord et al. analyse three key areas in which they see ‘fault lines’ of varied discourses and orientations emerging in which it is not always clear which of these are more reflective of actual food fraud realities. These include food fraud research orientations, food fraud detection and prevention methods and food fraud regulation and criminalisation. One of the contested perceptions and conceptualisations of food crime is the association with either organized crime or corporate crime. Studying both conceptualizations as empirical cases in the UK and Italy, Rizutti advocates for conceptual clarity when referring to the involvement of corporate crime, organised crime and mafia-type groups active in the food sector. In so doing, it presents and reflects upon ‘organised food crime’ as a new socio-legal category and highlights its policy outcomes. Also looking at “food-fraud scandals” in the UK, Smith et al. reveal that there is a ‘scripted’ nature to both their revelation and resolution, which can be modelled to better understand how to investigate and theorise these incidents in context. By analyzing eight food related

incidents, some publicly labelled as ‘scandals’ and some not, Smith et al. demonstrate the contextualised anatomies of each specific incident to then identify the associated scripted themes and responses. Further criticizing current concepts and definitions, and by analyzing 53 criminal cases on food fraud in the Netherlands, Gussow and Mariët evaluate whether current understandings of food fraud are in congruence with actual incidence of food fraud. They suggest a modification of the definition of food fraud, applied to three distinctive types: food laundering, fraudulent food enhancement and facilitative food fraud.

Surpassing the underworld-underworld divide, Goodall takes the analysis to the countryside, by offering a comprehensive account of routinised illicit venison production in rural England. He refines the account of offending to a type of illicit rural food enterprise supply chain misconduct, actualised by un-regulated industry processes. Relations with licit rural-centric commerce are the necessary conditions of offending, which are enabled by the contingent conditions of sub-optimal game meat traceability systems and an absence of regulatory oversight at critical junctures. In a similar critical view of the political economy of meat production, but moving to the United States, Leon and Ken identify how the pork industry enjoys a symbiotic relationship with the state to create favourable conditions for three interrelated processes: monopoly and monopsony power; hyper-efficient but injurious working conditions; and union busting. Using structural contradictions theory, Leon and Ken explain the failure to protect workers, farmers, and communities as a feature of the fundamental contradiction between protection and accumulation within the capitalist state.

The remaining papers take a more practical approach in assessing methods to detect and prevent particular forms of food fraud. Manning et al. identify the potential adulterants in dietary supplement adulteration and consider what governance systems can be implemented to reduce the likelihood of such practices occurring. Three types of supplement are considered in particular, namely those supplements promoted for weight loss, sexual enhancement, and muscle building. Regulatory databases are used to determine the incidence of adulteration by product type and the nature of the adulterants being used. Huisman and Van Ruth examine how vulnerability for food fraud on company level and supply chain level can be assessed. They explore how criminological theory can be applied for assessing motivations and opportunities for internal and external actors to commit food fraud and assessing existing control measures to mitigate these vulnerabilities. Further, Huisman and Van Ruth present a survey instrument in which these elements have been used for assessing food fraud vulnerability of companies in food supply chains. The results of the application to several food supply chains and tiers are discussed, including milk, spices, extra olive oil, organic foods and the food service industry. This complements this state-of-the-art collection of papers in the special issue, that ranges from the critical discussion of key concepts and theories needed to understand the true nature of food related crimes and harms, to the criminogenics of particular food products.

References

- Ansell, C., & Vogel, D. (2006). *What's the beef? The contested governance of European food safety*. MIT Press.
- Cazaux, G. (2003). Het Federaal Agenschap voor de Veiligheid van de Voedselketen. In P. De Baets, S. De Keulenaer, & P. Ponsaers (Eds.), *Het Belgisch inspectiewezen. De niet ingeloste belofte* (pp. 155–171). Maklu.
- Cheng, H. (2012). Cheap capitalism: A sociological study of food crime in China. *British Journal of Criminology*, 52(2), 254–273.
- Collee, J. G., Bradley, R., & Liberski, P. P. (2006). Review article: Variant CJD (vCJD) and Bovine Spongiform Encephalopathy (BSE): 10 and 20 years on: part 2. *Folia Neuropathologica*, 4(2), 102–110.
- Croall, H. (2007). Food crime. In P. Beirne, P., & N. South (Eds.), *Issues in green criminology* (pp. 206–229). Routledge.
- Croall, H. (2013). Food crime: A green criminology perspective. In A. Brisbane, & N. South (Eds), *Routledge international handbook of green criminology* (pp. 167–183). Routledge.
- Dines, N., & Rigo, E. (2015). Postcolonial citizenships and the “refugeeization” of the workforce: Migrant agricultural labor in the Italian Mezzogiorno. In S. Ponzanesi, & G. Colpani (Eds), *Postcolonial transitions in Europe: Contexts, practices and politics* (pp. 151–172). Rowman and Littlefield.
- European Parliament (2013). *Report on the food crisis, fraud in the food chain and the control thereof (2013/2091(INI)*. Committee on the environment, public health and food safety.
- GFSI. (2018). *Tackling food fraud through food safety management*.
- Greenfield, V., & Paoli, L. (2013). A framework to assess the harms of crime. *British Journal of Criminology*, 53(5), 864–885.
- Greenfield, V. A., & Paoli, L. (2022). *Assessing the harms of crime: A new framework for criminal policy*. Oxford University Press.
- Gussow, K. E. (2020). *Finding food fraud: Explaining the detection of food fraud in the Netherlands [Doctoral dissertation]*. Vrije Universiteit Amsterdam.
- Hartung, F. E. (1950). White-collar offenses in the wholesale meat industry in Detroit. *American Journal of Sociology*, 56(1), 25–34. <https://doi.org/10.1086/220640>
- Havinga, T. (2006). Private regulation of food safety by supermarkets. *Law & Policy*, 28(4), 515–533. <https://doi.org/10.1111/j.1467-9930.2006.00237.x>
- Hoffmann, S., & Harder, W. (2010). Food safety and risk governance in globalized markets. *Health Matrix*, 20.
- Kersten, L. (2022). *Sound and safe: Regulatory practices and harm reduction in the Belgian meat sector Loes* [Unpublished PhD thesis]. KU Leuven Faculty of Law and Criminology.
- Lawless, J., & Wiedemann, K. (2011). European meat inspection – Continuity and change in building a (more) risk-based system of regulation. *European Food and Feed Law Review*, 6(2), 96–103.
- Lawrence, S., Elliott, C., Huisman, W., Dean, M., & van Ruth, S. (2022). The 11 sins of seafood: Assessing a decade of food fraud reports in the global supply chain. *Comprehensive Reviews in Food Science and Food Safety*. <https://doi.org/10.1111/1541-4337.12998>
- Leon, K. S., & Ken, I. (2019). Legitimized fraud and the state-corporate criminology of food – a Spectrum-based theory. *Crime Law and Social Change*, 71, 25–46.
- Lierman, T. (2009). Consumptierisico's en voedselveiligheid. In G. Vande, Walle, & Van P. Calster (Eds), *De criminologische kant van het ondernemen* (pp. 141–156). Boom Juridische Uitgevers.
- Lord, N. (2017). In pursuit of food system integrity: The situational prevention of food fraud enterprise. *European Journal on Criminal Policy and Research*, 23(4), 483–501.
- Lord, N., Elizondo, F., & Spencer, J. (2017). The dynamics of food fraud: The interactions between criminal opportunity and market (dys)functionality in legitimate business. *Criminology and Criminal Justice*, 17(5), 605–623.
- Philips, N., Bridgeman, J., & Ferguson-Smith, M. (2000). *Evidence and supporting papers of the Inquiry into the emergence and identification of Bovine Spongiform Encephalopathy (BSE) and variant Creutzfeldt-Jakob Disease (vCJD) and the action taken in response to it up to 20 March 1996*.
- Ritchie, M. (2004). The high price of cheap food. In N. Passas, & N. Goodwin (Eds), *It's legal but it ain't right. Harmful social consequences of legal industries* (pp. 178–193). University of Michigan Press.

- Rossi, J., & Garner, S. A. (2014). Industrial farm animal production: A comprehensive moral critique. *Journal of Agricultural and Environmental Ethics*, 27(3), 479–522. <https://doi.org/10.1007/s10806-014-9497-8>
- Smith, R. (2015). Documenting the UK “Black Fish Scandal” as a case study of criminal entrepreneurship. *International Journal of Sociology and Social Policy*, 35(3/4), 199–221. <https://doi.org/10.1108/IJSSP-02-2014-0018>
- Spencer, J., Lord, N., Benson, K., & Bellotti, E. (2018). ‘C’ is for commercial collaboration: Enterprise and structure in the ‘middle market’ of counterfeit alcohol distribution. *Crime Law and Social Change*, 70, 543–560.
- Spink, J., & Moyer, D. C. (2011). Defining the public health threat of food fraud. *Journal of Food Science*, 76(9), 157–163.
- Spink, J., & Moyer, D. C. (2013). Understanding and combating food fraud. *Food Technology*, 67(1), 32–35.
- Sutherland, E.H. ([1949] 1983). *White collar crime*. Dryden.
- van der Meulen, B. (2010). The function of food law. *European Food and Feed Law Review*, 2, 83–90.
- van der Meulen, B., & Freriks, A. (2006). Beastly bureaucracy’: Animal traceability, identification and labeling in EU law. *Journal of Food Law & Policy*, 2, 43.
- van Ruth, S. M., Huisman, W., & Luning, P. A. (2017). Differences in fraud vulnerability in various food supply chains and their tiers. *Food Control*, 84, 375–381.
- van Ruth, S. M., Luning, P. A., Silvis, I. C. J., Yang, Y., & Huisman, W. (2017). Food fraud vulnerability and its key factors. *Trends in Food Science and Technology*, 67, 70–75.
- Vos, E. (2000). EU food safety regulation in the aftermath of the BSE crisis. *Journal of Consumer Policy*, 23(3), 227–255. <https://doi.org/10.1023/A:1007123502914>
- Walters, R. (2007). Food crime, regulation and the biotech harvest. *European Journal of Criminology*, 4(2), 217–235.
- Walters, R. (2010). *Eco crime and genetically modified food*. Routledge-Cavendish.
- Wengle, S. (2016). When experimentalist governance meets science-based regulations; the case of food safety regulations. *Regulation & Governance*, 10(3), 262–283. <https://doi.org/10.1111/rego.12067>
- Yang, Y., Huisman, W., Hetting, K. A., Liu, N., Heck, J., Schrijver, G. H., Gaiardonia, L., & van Ruth, S. M. (2019). Fraud vulnerability in the Dutch milk supply chain: Assessments of farmers, processors. *Food Control*, 95(1), 308–317.

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.