Appendix 8: What works to prevent food fraud- comparison of food fraud vulnerability assessment models and tools and food fraud prevention strategies

Table 8.1 Food Fraud Vulnerability Assessment Models

Source	Joint Nordic Food Fraud Threat Assessment for Food Fraud	Spink et a
Metrics	33 measures 5 x 5 matrix for assessment of impact and probability. 4 x 4 matrix for assessment of impact and probability used in the national threat assessments with the unknown dimension.	5 X 5 Ma
Risk criteria	Impact and probability 5 levels. Very high, high, moderate, low, very low. National threat Impact and probability 4 levels high, moderate, low, unknown	5 levels Very high very low
Likelihood		X
Impact	X Financial X Societal	X
Consequences	-	-
Opportunities	X Technical opportunities; Opportunities in time and space	X Techni Opportu space

Motivations	X Financial motives; Culture and conduct	-
Control (supervisory) measures	X Technical; Prevention	-

Table 8.2 Food Fraud Prevention Models

Model	Food Fraud Initial Screening Model (FBO level)	Food Fraud Prevention Strategy (FBO Level)	Food Fraud Prevention Strategy (national
Source	Spink et al. (2016a)	Spink et al. (2016b)	Spink et al. (2017)

Model	Food Fraud Initial Screening Model(FBO level)	Food Fraud Prevention Strategy (FBO Level)	Food Fraud Prevention Strategy (national
Stage 1 Define scope, basic terms and screen hazards/threats	Food Fraud Initial Screening (FFIS) Matrix Variables Product or Group AND Market or Region Step 1 define the scope and basic terms. Step 2 Review incidents (databases) and suspicious activity Step 3A Conduct FFIS for health hazards. Step 3B Conduct FFIS for enterprise wide risks and financial impact.	Food Fraud Initial Screening (FFIS) Matrix Review phase Organise team Create Food Fraud Policy, Mission Statement, Draft Food Fraud Prevention Strategy/Plan Conduct FFIS Gather background information to inform FFVA	Developin common s point and developin sharing of practices vulnerabil assessme Third part develop standards protocols approache be audited certificate

Model	Food Fraud Initial Screening Model(FBO level)	Food Fraud Prevention Strategy (FBO Level)	Food Fraud Prevention Strategy (national
Stage 2 Conduct hazard analysis/vulnerability assessment and document	Food fraud vulnerability assessment (very high to very low) Step 4 (paper states this is risk ranking)	Undertake FFVA	Undertake at national business l
Stage 3 Undertake risk ranking using matrix or decision tree or other tool.	Corporate Risk Map Plots FFIS risk assessments 5x5 matrix likelihood (very high to very low) AND Impact (very high to very low). Step 4 In Spink et al., (2019) this changes to Likelihood and consequences	Map food fraud vulnerabilities	-

Model	Food Fraud Initial Screening Model(FBO level)	Food Fraud Prevention Strategy (FBO Level)	Food Fraud Prevention Strategy (national
Stage 4 Development, validation, implementation and verification of a food control management system (FCMS)	Resource Allocation Decision based on risk rating, (Step 4)	Consider countermeasures and control systems to address Very High and high vulnerabilities. Propose a Food Fraud Prevention Plan.	Develop a implemen appropriat counterme and contro systems.