

### 3.23 European alerting and monitoring data as inputs for the risk assessment of microbiological and chemical hazards in spices and herbs

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**Introduction:** Food chains are susceptible to contaminations from food-borne hazards, including pathogens and chemical contaminants. An assessment of the potential product-hazard combinations can be supported by using multiple data sources.

**Purpose:** The objective of this study was to identify the main trends of food safety hazards in the European spice and herb chain, and then, evaluate how the data sources can be used during each step of a microbiological and a toxicological risk assessment. Thereafter, the possibilities and limitations of the selected data sources for the risk assessment of certain hazards in spices and herbs are examined.

**Methods:** European governmental alerting and monitoring data and legislation were examined and evaluated for particular product-hazard combinations.

**Results:** Pathogenic microorganisms, particularly *Salmonella* spp. and pathogenic *Bacillus* spp., were identified as a potential concern in black pepper and dried herbs, while mycotoxins like aflatoxin (B1) and ochratoxin A were a probable concern in chilies (including chili powder and cayenne), paprika, and nutmeg.

**Significance:** Evaluating multiple, accessible, data sources can support several steps during the risk assessment process as seen for the hazard identification step. Therefore, identifying the potential spice and herb food safety hazards in the chain and how the data can be used for a risk assessment can support risk assessors in compiling a comprehensive risk assessment.

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