

IMPACT OF GLOBAL AGRI-FOOD COMMODITY FLOWS ON FOOD AND FEED SAFETY

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ABSTRACT

The agri-food industry has rapidly globalized due to the constant growth of international trade during the last decades. Outsourcing and offshoring of production processes have led to an increased diversity and a high number of entities, processes and localizations as well as an enhanced complexity in product and information flow. Global, highly interconnected agri-food supply chains may create food safety risks and vulnerabilities at multiple points at the various supply chain stages. In the area of risk management, the evaluation of health risks (risk assessment), as well as in the field of early risk identification the focus has so far been on the supply chain stages "(primary) production", "processing" and "wholesale and retailing". The processes between these stages - the global commodity flows - were not yet sufficiently taken into account. The resulting knowledge gaps in the field of international logistics may pose challenges for risk assessors.

We developed a comprehensive Conceptual framework (CF) of global agricultural bulk commodity (ABC) flows in order to understand the complexities of the international logistics sector and to systematize research in that field of food safety. The CF was constructed based on a qualitative approach using Grounded Theory. ABC flows are illustrated and characterized by three categories: 1. Processes, 2. Core actors and 3. Routes and nodes. Influential sectors are differentiated in two categories: I. Logistics-related conditions and II. Drivers of change. Further, food safety concepts were identified: A. Management, B. Coordination / Cooperation, C. Quality and capacity of routes and nodes, D. Diversity of logistics-related conditions and E. Dynamics of driver of change. In addition, the CF served as the basis for the identification of critical factors related to food safety through expert interviews. The CF and preliminary results of the expert interviews with representatives from the international logistics and agricultural trade sector as well as from the food and feed industry will be presented.

Keywords: food safety, globalization, vulnerabilities.