International Implications of Labeling Foods Containing Engineered Nanomaterials

To provide greater transparency and comprehensive information to consumers regarding their purchase choices, the European Parliament and the Council have mandated via Regulation 1169/2011 that foods containing engineered nanomaterials (ENMs) be labeled. This review covers the main concerns related to the use of ENMs in foods and the potential impacts that this type of food labeling might have on diverse stakeholder groups, including those outside the European Union (EU), e.g., in the United States. We also provide recommendations to stakeholders for overcoming existing challenges related to labeling foods containing ENMs. The revised EU food labeling requirements will likely result in a number of positive developments and a number of challenges for stakeholders in both EU and non-EU countries. Although labeling of foods containing ENMs will likely improve transparency, provide more information to facilitate consumer decisions, and build trust among food safety authorities and consumers, critical obstacles to the successful implementation of these labeling requirements remain, including the need for (i) harmonized information requirements or regulations between countries in different regions of the world, (ii) clarification of the regulatory definitions of the ENMs to be used for food labeling, (iii) robust techniques to detect, measure, and characterize diverse ENMs in food matrices, and (iv) clarification of the list of ENMs that may be exempt from labeling requirements, such as several food additives used for decades. We recommend that food industries and food safety authorities be more proactive in communicating with the public and consumer groups regarding the potential benefits and risks of using ENMs in foods. Efforts should be made to improve harmonization of information requirements between countries to avoid potential international trade barriers.