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Review paper

# Flexibility and amendments of the Codex Alimentarius aimed towards small food business entities

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#### ABSTRACT

The Codex Alimentarius represents a collection of international standards and guidelines concerning food safety. It was developed by the Food and Agriculture Organization (FAO) and the World Health Organization (WHO). Encompassing various aspects of food production, from manufacturing to labeling, this comprehensive document primarily serves large industrial producers. However, the needs of small entrepreneurs in the food industry are increasingly being recognized. This paper explores potential adaptations of the Codex Alimentarius to better align with the requirements of micro- and small entities, with a particular focus on promoting flexibility and ensuring safety in their operations. Additionally, existing regulations that already allow for flexibility are examined, along with suggestions for further amendments aimed at small businesses in the food industry. Finally, this document addresses challenges related to the implementation of such measures, including enforcement, capacity-building, and raising awareness.

### 1. Introduction

The Codex Alimentarius is a globally recognized compilation of standards, guidelines, and codes of practice pertaining to food safety, quality control, and the production of consumable goods. With a history spanning over a century, it has emerged as one of the paramount references for ensuring global food safety and quality assurance. In recent years, however, the necessity to grant small entities in the food industry access to and benefits from the same protective mechanisms as larger enterprises has been increasingly understood. As a result, several flexibilities and additions have been introduced to the Codex Alimentarius, with a particular focus on catering to the needs of small entities. These flex-

ibilities, such as exemptions from certain regulations or less stringent requirements, aim to ensure that small entities are not disadvantaged in comparison to their larger counterparts. This is especially significant considering the significant contribution that small businesses make to local economies, both in terms of job creation and economic growth. These additions also promote fair competition among food producers, enabling them to operate on an equal footing, regardless of their size or resources.

In addition to regulatory flexibility, the Codex Alimentarius provides valuable guidance to small businesses on a wide range of topics, including food safety and quality assurance. This encompasses instructions for developing appropriate systems and processes to ensure compliance with necessary

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standards, as well as advice on effective risk management related to the production of consumable goods. By following these guidelines, small enterprises can establish trust with customers and other stakeholders, thereby facilitating their sustainable growth and development. Consequently, it is imperative for small entities to familiarize themselves with the Codex Alimentarius and utilize it as a reliable resource during consumable goods production. Furthermore, the Codex Alimentarius offers crucial insights into emerging trends in food safety, such as the integration of digital technologies into quality assurance systems. This includes guidance on incorporating data collection and traceability, as well as advice on using predictive analytics to identify potential risks. By staying abreast of the latest advancements in the food industry through the Codex Alimentarius, small businesses can remain competitive and compliant in an ever-evolving environment.

Emphasizing the Importance of Leadership and FSMS: Recognizing the significance of leadership and food safety management system (FSMS) in maintaining safety and quality standards, the Codex Alimentarius has implemented a FSMS-based certification scheme (FCS). This scheme provides assurance to small food businesses regarding the high quality of their practices. It allows flexibility in the implementation of food safety management systems, along with the ability to incorporate new elements or modifications as needed. The Codex Alimentarius maintains a dynamic nature to cater to the needs of small food business entities. It has established a certification scheme for small processors and manufacturers, known as good manufacturing practices (GMP) principles. This enables these businesses to obtain product certification in line with GMP standards, overseen by an independent third party. Furthermore, the Codex Alimentarius encourages flexibility and additions to its code. It provides guidance to small processors and manufacturers on how to comply with food safety requirements without significant changes or modifications to their operations. Additionally, the Codex allows for the revision of guidelines and recommended practices as needed to ensure food safety maintenance. Moreover, the Codex promotes risk assessment approaches tailored to the specific nature of small business operations. It offers guidance and examples to small processors and manufacturers for the effective implementation of risk management plans. Additionally, the Codex recognizes the need to address the unique

requirements of small food business entities, especially concerning labeling regulations. For instance, it allows simplified labeling requirements for small packages or containers, as well as exemptions from certain labeling requirements for small processors and manufacturers. Lastly, the Codex encourages the use of harmonized international standards and has formed partnerships with various organizations to provide technical assistance to small food businesses. This includes access to training materials on GMP principles and related topics, as well as advice and guidance on the implementation of good food safety practices. Such assistance helps small enterprises understand and comply with food safety regulations, ultimately safeguarding public health. The Codex Alimentarius serves as an invaluable tool in ensuring safe food production and distribution worldwide. By providing guidelines tailored to the needs of small businesses, it ensures that food safety standards are adhered to, even for those operating on a small scale. In this way, the Codex contributes to public health protection by promoting food safety for all. Beyond food safety guidelines, the Codex supports sustainable development and environmental protection. Through its standards and codes of practice, it encourages environmentally friendly practices in food production, distribution, and marketing. This helps ensure that food production occurs in a manner that minimizes environmental impacts, such as pollution and resource depletion. The Codex Alimentarius has proven to be an invaluable tool in promoting global food safety and sustainable development. Its standards and guidelines ensure that food produced worldwide meets acceptable levels of safety, quality, and sustainability. Moreover, its focus on small food businesses aids in protecting public health by ensuring compliance with good food safety practices in these industries.

Food Safety Culture: Food safety culture is widely recognized as a key element for the success of a food safety system. This culture encompasses the knowledge, attitudes, and behaviors shared among employees in the food industry. To cultivate this culture within small entities, it is crucial to provide them with flexibility in aligning with Codex Alimentarius standards. Given their limited resources and qualified personnel, these entities require additional support to ensure compliance with these standards. The Codex Alimentarius Commission has introduced several initiatives aimed at facilitating the adoption of food safety practices by small food business entities. These initiatives include providing

guidance documents for small producers, promoting access to validated systems and networks for designing customized food safety management plans, and developing simplified tools to facilitate the implementation of food safety programs. Furthermore, the Codex Alimentarius actively promotes the concept of "harmonized good practices", specifically tailored to small operations in developing countries. This approach seeks to promote safe production practices while considering the local context and specificities of each country. To support this endeavor, the Commission has developed a set of principles and guidelines for harmonized good practice, which have been adopted by various countries. Furthermore, the Codex Alimentarius aims to provide additional support to small food business entities. This includes offering training materials and programs, providing technical advice and assistance, and developing user-friendly tools to enhance understanding of food safety requirements and their implementation, particularly for less experienced personnel. Moreover, the Commission has established a network of regional centers and a global database containing risk profiles for various food items. These resources are intended to facilitate access to information for small entities, enabling them to better comprehend the applicable Codex Alimentarius standards. In other words, these efforts are geared towards aiding small entities in achieving food safety compliance and reducing the risk of associated health hazards. By providing access to resources, training, and support, the Codex Alimentarius strives to contribute to a safer global food supply. Simultaneously, the Commission is also working on promoting fair trade practices in the international food sector. Collaborating with various organizations enables the development and implementation of measures to establish fair pricing, enforce food safety standards, and regulate the global food supply chain. This includes the introduction of principles for accurate food labeling, providing consumers with essential information about origin, composition, and nutritional value. The Codex Alimentarius is also dedicated to reducing market disruptions that can lead to unfair practices regarding prices or the safety of food products. Overall, the Codex Alimentarius serves as a valuable resource for small food business entities by providing access to resources and guidelines on food safety requirements. The Commission's efforts contribute to ensuring the production of safe food in line with international standards, while also promoting equal access to goods and services across the global market. Through these initiatives, the Codex Alimentarius supports the development of healthier and more sustainable dietary systems worldwide (*Tanemura et al.*, 2017).

Emphasized control measures: Emphasized control measures are needed to ensure that flexibility is embedded in the Codex Alimentarius, especially for small entities in the food business. Small producers, processors, and retailers often lack resources and technical expertise, making compliance with Codex guidelines challenging or even impossible. Therefore, it is crucial to establish a set of measures to ensure that these smaller players are given an opportunity to adhere to international standards. To this end, the Codex Alimentarius Commission should consider introducing additional measures to facilitate compliance for small entities in the food business. This could encompass streamlined procedures and documentation requirements, simplified hazard analysis and critical control point (HACCP) plans, streamlined certification processes, and more flexible labeling and packaging standards. Furthermore, steps should be taken to ensure that the implementation of Codex regulations is fair and equitable, regardless of the size of food enterprises. Moreover, it is essential that more resources are allocated to educating and training small entities in the food business about Codex Alimentarius requirements. National bodies should provide compliance guidelines with Codex standards, as well as access to information about new developments and initiatives related to Codex Alimentarius. Small entities should have access to technical assistance and capacity-building programs that would enable them to become aware of their responsibilities regarding food safety and Codex compliance (Meulen, 2019). Finally, it is important to assist and promote the development of innovative technologies for small entities in the food business. This could include mobile applications providing information about food safety regulations and certification requirements, as well as platforms for sharing best practices related to Codex Alimentarius regulations. Technologies like these could help small entities better understand their obligations and ensure they are capable of adhering to the international standards set within the Codex (Price, 2020).

Insistence on validation and verification: Validation and verification of Codex Alimentarius standards, particularly for small entities in the food industry, are of paramount importance. This ensures that national and international agencies are

fully informed about any potential issues related to small-scale food production or manufacturing. Furthermore, it is crucial for competent authorities to remain vigilant in detecting any violations that may pose risks to public health or other forms of harm. In order to facilitate compliance with Codex Alimentarius standards, governments should consider implementing adaptable control measures. This may involve reducing testing frequency for small-scale production facilities or granting exemptions from certain record-keeping or documentation requirements. Such measures would enable smaller entities in the food industry to optimize resource management and focus on ensuring food safety and quality. Moreover, it is important to recognize that small businesses face distinct challenges compared to larger enterprises. Therefore, governments should adopt additional measures that take into account the resources available to small entities in the food industry. This could include providing greater flexibility in compliance deadlines or offering technical support to operators for the effective implementation of Codex standards. Ultimately, governments must demonstrate a strong commitment to ensuring compliance with the standards and regulations established by Codex Alimentarius for small businesses in the food industry. This approach would create equal conditions for all stakeholders, while simultaneously preserving the safety and quality of food products in the market. Implementing such measures will not only benefit producers and manufacturers, but will also contribute to a safer and more secure food supply for all consumers (Leprêtre, 2018).

Allergens: The Codex Alimentarius has recently emphasized the importance of ensuring the safety of food products to protect consumer health. According to Codex standards, allergens and additives must be declared on food labels. However, there is a certain degree of flexibility within these standards for small entities, such as micro-businesses or small producers of traditional foods. Specifically, the Codex Alimentarius has outlined a series of recommendations for small producers with the aim of promoting flexibility and recognizing the unique circumstances of these micro-entities (see Annex III). These recommendations include the possibility of exemptions from certain labeling requirements or exceptions from specific standards applied to larger companies. Furthermore, the Codex Alimentarius can provide guidance for providing appropriate health warnings or advice, as well as for the use of precautionary statements and advisory labels (Kruger et al., 2020).

Traceability and Attention to Small FBOs: The Codex Alimentarius Commission has taken into consideration the needs of small entities in the food business, especially those operating with limited resources. They have sought to ensure that smaller businesses do not face undue additional burdens when striving to comply with international standards. To this end, greater flexibility and tailored solutions have been introduced for smaller FBOs, such as reduced testing and certification requirements. For instance, the commission has introduced a simplified version of the Codex HAC-CP system, designed to be more easily applicable for small enterprises. Food safety culture, allergen management, changes in HACCP principles, a new decision tree, definition and terminology changes, and the role of the Codex Alimentarius Commission — all these topics contribute to the dedication of the Codex Alimentarius Commission to ensuring food safety in global markets. With this dedication comes the recognition of the need for greater flexibility in the application of its standards and codes, particularly for small entities in the food business. Small entities encompass various stakeholders, including small food producers, importers, and processors. Due to limited resources and capacities, they often struggle to meet the standards outlined in the Codex Alimentarius. Therefore, it is crucial to provide increased flexibility in the implementation of these standards for small entities. To address this issue, the Codex Alimentarius Commission has introduced specific addenda and amendments tailored to small entities in the food business. This includes simplified risk-based classification, streamlined HACCP principle application, and a new decision tree to assist small enterprises in determining applicable standards within their specific circumstances (WHO, 2018).

Furthermore, the Commission has enhanced flexibility in the definitions and terminology used within its standards, ensuring better understanding and compliance for small entities. Encouraging the use of simple language further facilitates comprehension. By incorporating these additions and amendments, the Codex Alimentarius Commission enables the safe participation of small entities in global food markets without compromising safety or quality. This commitment supports food supply safety worldwide and promotes sustainable economic growth. These changes exemplify the Commission's dedication to providing guidance and support to all stakeholders in the food busi-

ness, regardless of size or resources. In the future, further adjustments are likely to be made to better tailor to small entities in the global food market. By offering additional support and guidance to small entities, the Codex Alimentarius Commission contributes to the availability of safe and quality food products for all stakeholders in the global food business. This, in turn, stimulates economic growth, reduces poverty, and enhances consumer nutrition worldwide. The Commission's work plays a vital role in ensuring a safe and secure global food system. Ultimately, the Codex Alimentarius Commission encourages small entities to familiarize themselves with standards and their application to their specific operations. Understanding these standards is essential for any small entity wishing to engage in international trade and ensure product safety. The Codex Alimentarius provides comprehensive guidance on this topic, along with other relevant information. With these guidelines and assistance, small businesses can confidently meet the highest safety standards for their products (Ree et al., 2021).

#### 2. Conclusion

The flexibility and additions to the Codex Alimentarius have greatly benefited small businesses in the food industry. Regulatory requirements have been reduced, new labeling and safety provisions have been introduced, and recognition of regional differences has promoted fair resource distribution. These changes have enhanced global food safety standards, while improving cost-effectiveness and efficiency in food production and distribution. Undoubtedly, the Codex Alimentarius has proven to be an invaluable tool for small enterprises, allowing them to maintain competitiveness while adhering to safety and quality standards. As the Codex Alimentarius continues to evolve, its impact on the food industry is expected to further increase. The document remains a living framework, adapting to changing food safety regulations and ensuring that small businesses can thrive while upholding the highest levels of safety and quality. The ongoing flexibility and additions to the Codex Alimentarius will undoubtedly continue to benefit small businesses in the food industry in the years to come.

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### References

- Kruger, J., Taylor, J. R., Ferruzzi, M. G. & Debelo, H. (2020).
  What is food-to-food fortification? A working definition and framework for evaluation of efficiency and implementation of best practices. *Comprehensive Reviews in Food Science and Food Safety*, 19(6), 3618–3658.
- **Leprêtre, C. & Merten-Lentz, K.** (2018). Feature: The 50<sup>th</sup> session of the Codex Alimentarius Committee on Food Additives (CCFA50). *World Food Regulation Review*, 27(11), 19–29.
- **Meulen, B. (2019).** Impact of the Codex Alimentarius. *European Food and Feed Law Review*, 14(1), 29–50.
- Price, S. & World Health Organization, (2020). Codex and the SDGs: how participation in Codex Alimentarius supports the 2030 Agenda for Sustainable Development.
- Ree, R., Sapiter Ballerda, D., Berin, M. C., Beuf, L., Chang, A., Gadermaier, G. & Bowman, C. (2021). The COMPARE database: a public resource for allergen identification, adapted for continuous improvement. *Frontiers in Allergy*, 2, 700533.
- Tanemura, N., Hamadate, N. & Urushihara, H. (2017). The need for consumer science and regulatory science research on functional foods with health claims-What should we do to harmonize science and technology with society. *Trends in Food Science & Technology*, 67, 280–283.
- World Health Organization, (2018). *Understanding the Codex Alimentarius*. Food & Agriculture Organization.