

Digital solutions to enhance food safety and sustainability – perspectives from Finnish Lapland

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Abstract

Statement of the Problem: There is a need to ensure that our foods are safer and an urgent call to transform the food system to be more sustainable. Food agriculture and processing have impacts on individual and planetary health. Food systems will need to be more resilient in order to adapt to the consequences of climate change, pandemics and other crises. The link between climate change and food security is well established, it is a widely discussed topic with an urgent need to mitigate the impacts of climate on food production. Given that food systems are complex but dynamic, it is important to adopt a more holistic approach that incorporates innovative digital solutions in the food value chain from production to consumption. **Methodology & Theoretical Orientation:** A study of different processing methods with considerations on the use of energy and water. Digital solutions can play a significant role on how food products reach consumers in a safe and wholesome form without compromising quality as shown during the COVID era. In the Arctic region context, how the activities of our future food system can affect the climate and vice-versa is an important research area that will benefit from collaborative work. Furthermore, the role of digitalization in the overall food system from production to consumption including the disposal of waste is emphasized with perspectives from Finnish Lapland. **Findings:** The digital tools have significant role in contributing to safety. The existing infrastructures in the region are important to support digital tools. The uptake of digital tools by food producers is highly dependent on their size. Micro, small and medium enterprises (MSMEs) often need to catch up with large enterprises. **Conclusion & Significance:** There is a need to ensure that the value chain for traditional and local food resources that are abundant in the region is developed with innovative technologies. In this presentation, an analysis of the primary steps that are involved in converting raw traditional foods to the final steps of packaged foods and its marketing with digital solutions is carried out. In addition, it is highlighted how digital solutions will help micro, small and medium enterprises (MSMEs) to provide a means to preserve, protect, merchandise and distribute foods within the local economy. When these resources are valorised by MSMEs, which are significant economic drivers in the Lapland region they need to be sustainable.

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Biography

Dele Raheem holds a doctoral degree in Food Sciences from the department of Food and Environmental Sciences at the University of Helsinki, Finland. He is also an Associate Professor, Food Microbiology (University of Helsinki). He obtained the Post Graduate Certificate in Education from the University of Greenwich, London, UK. Dele's research

interest is in food bio-processing, preservation and other crosscutting issues related to food security and safety. He has gained extensive research and industrial experience in the last three decades. Currently, he is affiliated to the Arctic Centre at the University of Lapland, Finland as a Senior Researcher.