Innovative Technology to Sustain Food Security in Qatar

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Abstract : Food security in Qatar is a research priority of Qatar University (2021-2025) and all national strategies, including the Qatar National Vision 2030 and food security strategy (2018-2023). Achieving food security requires three actions: 1) transforming surplus food to those who are insecure; 2) reducing food loss and waste by recycling food into valuable resources such as compost ("green fertilizer") that can be used in growing food; and, finally, 3) establishing strong enforcement agencies to protect consumers from outdated food and promote healthy food. Currently, these objectives are approached separately and not in a sustainable fashion. Food security in Qatar is a research priority of Qatar University (2021-2025) and all national strategies, including the Qatar National Vision 2030 and food security strategy (2018-2023). The study aims to develop an innovative mobile application that supports a sustainable solution to food insecurity and food waste in Qatar. The application will provide a common solution for many different users. For producers, it will facilitate easy disposal of excess food. For charities, it will notify them about surplus food ready for redistribution. The application will also benefit the second layer of end-users in the form of food recycling companies, who will receive information about available food waste that is unable to be consumed. We will use self-exoplanetary diagrams and digital pictures to show all the steps to the final stage. The aim is to motivate the young generation toward innovation and creation, and to encourage public-private collaboration in this sector.

 $\textbf{Keywords:} food\ security,\ innovative\ technology,\ sustainability,\ food\ waste,\ Qatar$

Conference Title: ICFA 2022: International Conference on Food Analysis

Conference Location: London, United Kingdom Conference Dates: December 09-10, 2022