Market vegetable hygiene practices affect on food quality and consumer health

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Abstract

The World Health Organisation estimates that food- and waterborne diarrheal diseases are the leading causes of morbidity and mortality in developing countries, causing approximately 1.8 million deaths annually. It has been pointed out that there are microbiological hazards associated with particularly leafy vegetables and the pathways for contamination, survival and persistence of these microbiological hazards start from the primary production of vegetables through to consumers. In most developing countries, access to clean water for urban vegetable irrigation is a major challenge. Contamination of vegetables occurs during growing (pesticides and fertilizers leading to heavy metal contamination), transport and at market places as in for example contamination from vehicle exhaust, road dust and polluted water used for moistening produce during retailing. Market handling of vegetables has increasingly raised public concerns due to the potential public health risks. One of the main sources of vegetable contamination is market-related handling practices among vegetable sellers particularly where provision of better sanitary standards such as clean water for washing is lacking. The use of one container of water for washing vegetables the whole day as observed don't only make them dirtier but can have serious health implications especially when consumed unwashed. Exotic vegetables like lettuce, cabbage, spring onions and the like are of particular food safety concern because they are most often eaten raw. Poor personal and environmental hygiene practices, poor storage system as well as display of foodstuffs on the ground, often near open drains, potentially open vegetables to further contamination. Vegetables sold in the markets are greatly exposed to houseflies and other pathogen-carrying insects. The stacking of vegetables into jute sacks, storing vegetables in open spaces and transportation in open trucks predispose vegetables to physical damage, high temperature and senescence. There are many factors accounting for unhealthy vegetable handling practices among market vegetable sellers.

Recent Publications

1- Abass K, Owusu AFS & Gyasi RM (2018). Market vegetable hygiene practices and health risk perceptions of vegetable sellers in urban Ghana. International Journal of Environmental Health Research, https://doi.org/10.1080/09603123.2018.1535057
2- Abass K, Ganle JK, Adaborna E. 2016. Coliform contamination of peri-urban grown vegetables and potential public health risks: evidence from Kumasi, Ghana. J Community Health. 4(12):392–397.
3- Lagerkvist CJ, Hess S, Okello J, Hansson H, Karanja N. 2013. Food health risk perceptions among consumers, farmers, and traders of leafy vegetables in Nairobi. Food Policy. 38:92–104.
4- FAO/WHO. 2008. Benefits and risks of the use of chlorine-containing disinfectants in food production and food processing. Report of a joint FAP/WHO expert meeting. Ann Arbor (MI), USA. 1–289.



Biography

DJOUHOU FOWE Michelle Carole is a Research Associate. As a scientist, her areas of interest are Food Science, Nutrition, Metabolism, Soil Bio-fertilization for Sustainable Agriculture and Food Safety. Michelle Djouhou, in addition to her academic background in Biochemistry, has followed several national and international training courses on leadership, personal development, business and entrepreneurship, data analysis and processing, scientific document writing, climate change, ethics. Involved in food processing techniques and processes allowing better valorization of food and reduction of post-harvest losses, she is also interested in the development of bio-products for plant protection against biotic and abiotic stress. Michelle Djouhou is the author of numerous scientific publications

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