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Potential Sources and Types of Food Safety Hazards in Selected Tomato Supply Chain of Ethiopia

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Abstract

Increased consumption of fresh (raw) fruit and vegetables is recommended for a healthy life. However, in countries where hygiene standards may be low, the chances of consuming contaminated fresh food, particularly vegetables, are high. In line with this, a survey was conducted to assess potential sources and types of food safety hazards of tomato fruits in its supply chain from small scale growers in central rift valley areas to central markets of Ethiopia.

Data were collected from both primary and secondary sources. The primary data were generated by a survey using a pre-tested structured questionnaire, key informant interviews using checklists and focus group discussions. Data on potential sources and types of food safety hazards were collected from a total of 146 respondents (70 farmers, 27 transporters and 59 traders). The data were analysed using SPSS software.

According to the respondents, 11.5 % of the land used for tomato production was previously used for animal production, 29 % of the adjacent farmland is used for a residential area, and most of the groundwater holes were not properly constructed and protected. Regarding surplus pesticide disposal system. 41.4 % indicated that they re-spray, 5.7 % dispose of it in the soil, and 45.6 % pour into irrigation pond. Regarding disposal of empty pesticide container, 98.6 % hang it on a wooden stalk or throw it in the farm. Similarly, 47.1 % and 91.4 % of the farms did not have a toilet and hand-washing facilities, respectively. All of the tomato growers did not receive any training related to food safety. Additionally, 46.7 % of the respondents use neither clean nor appropriate containers. A majority (75 %) of the product is loaded with any domestic good, and the produce is not covered during transportation; similarly, 75 % of product flow zones are not protected from contamination at the market place.

The food safety systems in the tomato supply chain were found to be inadequate. Therefore, the establishment of specific food safety steps and procedures and awareness creation to the actors is needed.

Keywords: Ethiopia, food safety, supply chain, tomato