

ABSTRACT

Fish-processing plants still face food safety (FS) challenges worldwide despite the existence of several quality assurance standards and food safety management systems/s (FSMSs). This study assessed performance of FSMS in fish exporting sector considering pressure from the context in which they operate. A FSMS diagnostic tool with checklist was used to assess the context, FSMS, and FS output in 9 Kenyan fish exporting companies. Majority (67%) companies operated at moderate- to high-risk context but with an average performance in control and assurance activities. This situation could be insufficient to deal with ambiguity, uncertainty, and vulnerability issues in the context characteristics. Contextual risk posed by product characteristics (nature of raw materials) and chain environment characteristics was high. Risk posed by the chain environment characteristics, low power in supplier relationships, and low degree of authority in customer relationships was high. Lack of authority in relationship with suppliers would lead to high raw material risk situation. Even though cooling facilities, a key control activity, was at an advanced level, there was inadequate packaging intervention equipment which coupled with inadequate physical intervention equipment could lead to further weakened FSMS performance. For the fish companies to improve their FSMS to higher level and enhance predictability, they should base their FSMS on scientific information sources, historical results, and own experimental trials in their preventive, intervention, and monitoring systems. Specific suggestions are derived for improvements toward higher FSMS activity levels or lower risk levels in context characteristics.

PRACTICAL APPLICATION:

Weak areas in performance of control and assurance activities in export fish-processing sector already implementing current quality assurance guidelines and standards were studied taking into consideration contextual pressure wherein the companies operate. Important mitigation measures toward improved contextual risk, core assurance, and control activities irrespective of applied food safety management systems in fish industries were suggested.