

**STUDY ON EXTENT OF HYGIENIC
STANDARDS APPLICATION OF
FRUITS & VEGETABLE INDUSTRY IN
SRI LANKA**

By

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M.Sc.

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DECLARATION

The work describe in this thesis was carried out by me under the supervision of Dr.K K D S Ranaweera of the University of Sri Jayawardhanapura and Dr. L N Senaweera of Sri Lanka Standards Institution, and a report on this work has not been submitted whole or in part of any other institution for another degree.

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We, Dr. K K D S Ranaweera and Dr. L N Senaweera certify that the statement made by the candidate is true and that this thesis is suitable for submission to the University for the purpose of evaluation.

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To

My Loving Teachers

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ABSTRACT

In complete food networks clear standards are needed to ensure efficient food production within a myriad of legal requirements. On the other hand, there is a growing influence of the consumer demands on the safety and quality of food products from farm to table concept. Therefore the agricultural supply of food production is facing remarkable changes, which is both challenge and opportunity for food producers to implement the quality and safety certifications. In this scenario, the implementation of quality and safety certifications has become an essential pre-requisite for the Sri Lankan fruits and vegetable processing industry, which maximize product quality and safety, gains acceptance and competitiveness in the local and international market.

A questionnaire based survey was carried out among the twenty five fruits and vegetable processing industries to find out targets, benefits and constraints of implementing certifications. The data were analyzed using k-mean cluster analysis.

Majority of the respondents have implemented SLS certification, as it is mandatory for most of the fruit and vegetable products. The identified major targets are focused on two objectives, “Market driven” and “Compulsory regulations”. According to our analysis, industry expected major benefits are also depict the market oriented view of industries. The identified major constraints were “Difficulties in train workers and Budgetary constraints”.

CHAPTER 1

INTRODUCTION

The importance of food safety for health and development has been recognized and addressed in many international forum. The most recent, the FAO/WHO International Conference on Nutrition declared that, "... Access to nutritionally adequate and safe food is a right of each individual". In spite of this recognition and advances in food science and technology that provide the know-how and tools to ensure food safety (Miller,1999).

The Codex Alimentarius Commission (CAC) defines food hygiene as ' all conditions and measures necessary to ensure the safety and suitability of food at all stages of the food chain'(Anon., 1997). Similarly, the EU's General Food Hygiene Directive has defined food hygiene as ' all measures necessary to ensure the safety and wholesomeness of foodstuffs'(Anon.,1993). The directive includes all the stages of the supply chain in this definition, from harvesting, milking or slaughter through to the point of consumption. Hygiene is defined in very broad terms, potentially incorporating any measures designed to prevent contamination of food, whether from a physical, microbiological or chemical source, at any stage of production.

The food industry faces an unprecedented level of scrutiny. Consumer concerns about safety have promoted an increasing level of regulation. Customer have ever higher expectations of quality, and food manufacturers have responded by developing systems to measure, manage and improve product quality more effectively. At the same time, there has been a shift in the relationship between the industry and the those setting and enforcing

standards. The traditional approach was a paternalistic one, with regulators setting and enforcing prescriptive standards, and food manufacturers responding retrospectively to infringements identified by regulatory inspections. This approach has been increasingly seen as inflexible and reactive. It is being replaced by a new relationship in which, within a framework of appropriate standards, food manufacturers take greater responsibility for the safety of their products.

The role of the regulator in this new relationship moves away from inspection of specific techniques and products to auditing the system set up by businesses to manage safety or quality proactively to prevent problems. With this shift, auditing has become a key issue for the food industry, from how regulators audit food businesses effectively, to how food businesses audit themselves to improve their performance.

Standards are agreed sets of criteria for ensuring consistent manufacture of food products from a safety, nutritional or management system perspective. These standards may be required by law or by the market. These standards are established by agreement and approved by a recognized body that ensures consistent manufacture within agreed rules. Completed standards should be simply documented technical specifications aimed at the safety and protection of the community.

In complex food networks clear standards are needed to ensure efficient food production within a myriad of legal requirements. The ISO (International Organization for Standardization) Guide reported the improved suitability of the product, process or service for an intended purpose when standards are used. Furthermore, standards should prevent

barriers to trade and enable technological co-operation. Standards may therefore be focused on, but not restricted to, variety control and protection of the product, consumer or environment, and also cover health and safety.

However, it is important to realize that the objectives of the organization can be multifaceted and reflect other primary business needs as well as the more obvious product quality issues. Total Quality management systems should therefore be capable of incorporating objectives as diverse as customer satisfaction, business growth, profit maximization, market leadership, environmental concerns, health and safety issues and reflect the company's position and role within the local community. One over-riding principle must be for the total Quality Management system to ensure compatibility with the needs of current legislation in all its guises-food safety, business practices, environmental and waste, employment rights and health and safety.

Therefore in Sri Lanka there is an urgent need to improve the quality and safety of the processed foods, to maintain the demand in the local and especially in the global market and to have competitive prices. In this context, introduction and implementation of modern quality and safety assurance concepts, to food processing enterprises in Sri Lanka is very important.

SLS Certification and other Certifications are very important in fruits and vegetable processing industry. But implementation of these certifications is very limited in Sri Lanka. SLS Certification is compulsory for the fruit and vegetable industries which produce, Ready-To-Serve fruit drinks(RTS-SLS 729), Fresh fruit cordials(SLS 214),Fruit cordial

concentrates, fruit squash concentrates and fruit syrup concentrates(SLS 730),Synthetic cordials(SLS 221). Generally, most of the manufactures who are engaged in agro-food processing industries in the country do not have proper knowledge about quality and safety of the food. There is a lack of information regarding the usefulness of the certifications and the potential benefits after implementing the certifications.