Sri-Lankan food industry plays a significant role in catering people of all ages to improve their well being. There are several major foods consumed directly or as a processed form which are coming from basic agricultural raw materials such as rice, grain, milk and meat. They are commonly sold in the open market via retailers. These provide required nutritional and health benefits for the masses. In addition to the benefits for the people, its role in developing national economy as a major contributor to the GDP and provider of employment has to be emphasised. This is in addition to its role in ensuring products of agriculture reach consumers as affordable, nutritious and safe products.

Due to ever increasing cost of living, common family units nowadays comprised of working parents. Their busy life style and attention to children matters reduce food preparation time can create a trend for increasing in demand for ready to eat processed foods as a convenient way of eating. Convenience foods are value added products that save consumer preparation time and available in many forms including snacks, fresh or frozen forms. Ever increasing world energy prices and its other related economic factors influence required inputs in the food processing plant operations results increase in the price of the final food product in the market. If this trend continuous there will be a hard time for poor consumers in balancing their budget. If preventive measures has taken to enhance industry performance Sri-Lankans can bravely faced the challenges in the future of the food manufacturing sector.

Improvement of the manufacturing efficiency can be seen as one method of lowering the cost of manufacture. There is no single approach to improve the manufacturing efficiency of food industry. Anyone in charge of the food manufacturing operations needs to be aware of recent techniques in improving the productivity of all units in the processing operations, which can be identified as improved machine efficiency, reduction of waste and improved services at the factory. Technical persons such as engineers and managers responsible for food
processing operations, has to be aware of the new developments in science, technology and engineering to fulfil this task.

One of the techniques which can use is mathematical modelling. There are many links between improved manufacturing efficiency and modelling in food processing operations. Modelling is a fast developing field of science which is still relatively underexploited in the food industry. In its modern day techniques it is a very user friendly method and does not need specialist knowledge. Modelling is a technique to calculate where and how improvements made to a process in the food processing plant. The main benefits are to find new solutions to established problems or reduce the amount of trial and error associated with the process. At the process level, understanding the relations between raw material properties and process settings in any food processing plant can help in reducing process time, increasing plant availability and specifying input and output quality of the products. Different models can be used to minimize down time, best use of equipment and workforce through scheduling and task management resulting in final finish product price to the consumer.

One other sophisticated technique is the application of Computational Fluid Dynamics (CFD). This has been used in the food industry since 1990. This needs a sophisticated computer system and academic assistance from a University is needed. Use of this technique can be used for identification of energy savings and other process and quality improvements in processing operations. Some identified areas of food processing are in spray drying, refrigeration retort sterilization and pasteurisation and bakery operations.

This is the high time for big Food Manufacturers in Sri-Lanka should take initiative to identify and improve operational efficiency of the food processing operations to reduce their costs of manufacture through adopting these techniques. As a start Sri-Lankan Universities can undertake this task and help the food manufacturers through an industry funded grant scheme where part of the financial assistance coming from the industry concern and some part from the government or granting tax rebates for the research and development activities. The benefits achieve to the company concerned will much more in financial terms than the invested cost of the study. University can employ under graduates under the guidance of the staff to carryout this study or start new postgraduate opportunities in this area where much more need future specialist knowledge, will be generated to cater for the food manufacturing sector. This is a win win situation for the food processing industry for providing low cost product with higher quality with lesser inputs than earlier. Ultimately an affordable better food product can be found in the local market. In future, there will be ample opportunities to cater for the international market generating much needed foreign revenue and place Sri-Lankan food industry in a world class place for ready to eat food market.